

DEER MICE AND THE HANTAVIRUS

SUMMER/1998



ROTUNDA

the magazine of the Royal Ontario Museum

AT THE ROM
ART OF THE
VICTORIA
AND
ALBERT
MUSEUM

DIVING TO
BERMUDA'S
UNDERWATER
MOUNTAINS

STAINED-GLASS
SPLENDOR
AT THE PEACE
TOWER

THE ENIGMA OF
THE PINCHED-
FACE PIPES

VOL. 31/No. 1
DISTRIBUTED BY CMPA
\$4.25





*Masters
Gallery Ltd.*

FOR THE BEST IN CANADIAN ART

ROTUNDA

the magazine of the Royal Ontario Museum

Volume 31, Number 1, Summer 1998

Date of Issue: June 1998

4

GROWING COLLECTIONS

An Athapaskan Quilled Belt, Symbol of Success
&
Slippers Fit for a Bride

9

FOOD AND CULTURE

Rhubarb

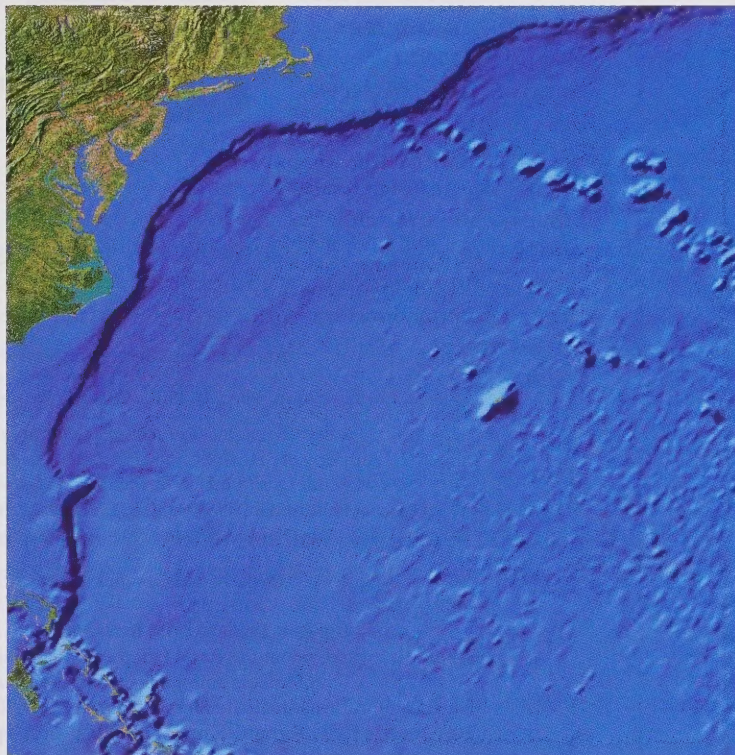
38

BOOK REVIEWS

Volcanoes, Stormy Weather, Archaeological Adventure, Dictionaries, Cities, Hans Holbein, and more

COVER

The Day Dream, 1880,
by Dante Gabriel Rossetti, is one of the 200 pieces on view at the ROM in the exhibition *A Grand Design: The Art of the Victoria and Albert Museum*. To read about the origins of the V & A turn to page 18. PHOTOGRAPH COURTESY THE VICTORIA AND ALBERT MUSEUM



12

REMEMBRANCE OF WAR

Shirley Ann Brown

Stained-glass windows in Ottawa's Peace Tower are an innovative tribute to Canadians at war

18

SOUTH KENSINGTON: ITS ORIGINS

Michael Conforti

The need for accessible collections to inform the public about English decorative and industrial arts gave birth to a revolutionary museum

26

HEALING SMOKE

Glenn Kearsley

In a time of crisis, Iroquoians used pinched-face smoking pipes to appeal for spiritual help

32

DESCENDING TO THE MOUNTAIN SUMMIT

Dale Calder

ROM research on Bermuda's seamounts opens a window to a previously unknown underwater world

41

PRACTICAL TIPS

Deer Mice and the Hantavirus

43

CONSERVATION NOTES

Don't Lacquer That Silver

46

ROM ANSWERS

48

LOOK AGAIN

Stretch to Fit



26



12

Moving?

Please give us
six weeks notice
of a change of address



NAME

ADDRESS

CITY

PROVINCE

POSTAL CODE

attach
mailing
label
here

ROTUNDA SUBSCRIBERS CONTACT:
Rotunda, 35 Riviera Drive, Unit 17
Markham, Ontario
L3R 8N4
or call (905) 946-0406

ROM MEMBERS CONTACT:
Membership Services,
Royal Ontario Museum,
100 Queen's Park,
Toronto, Ontario M5S 2C6
or call (416) 586-5700

ROTUNDA

the magazine of the Royal Ontario Museum

PATRONS

His Excellency The Right Honourable Roméo LeBlanc, P.C., C.C., C.M.M., C.D.
Governor General of Canada
The Honourable Hilary M. Weston
Lieutenant Governor of Ontario

BOARD OF TRUSTEES

Stephens B. Lowden
Chairman

Yeti Agnew
André Bekerman
Josephine Mary Breyfogle
Donald R. Brown, Q.C.
Robert Brown
Ann Cameron
Allen B. Clarke
F. Anthony Comper
Bronwyn Krog
Michael Levine

Brenda McCutcheon
Alan Middleton
Susan Murray
J. Robert S. Prichard, M.B.A., LL.B., LL.M.
Jean Read
Grant L. Reuber
Tom H. Savage
Lindsay Sharp, M.A., D. Phil. (Oxon.)
Harriet E. Walker
David J. S. Winfield

Andrea Schneider, *Acting Secretary*

Lindsay Sharp, M.A., D. Phil. (Oxon.), *President and Director*

Robert Barnett, *Vice-President, Cultural Innovations*
Anthony M. Hushion, *Vice-President, Information Services*
David Pendergast, Ph.D., *Vice-President, Collections and Research*
Michael Shoreman, *Vice-President, Business Affairs and Operations*
Barbara Wade, *Vice-President, Human Resources and Organizational Development*

Meg Beckel, *President and Executive Director, ROM Foundation*

GENERAL INFORMATION, ROYAL ONTARIO MUSEUM

The public is invited to join the Royal Ontario Museum and to share in its activities.
Members automatically receive *Rotunda*.

For further information write Membership Services, Royal Ontario Museum,
100 Queen's Park, Toronto, Ontario M5S 2C6, or telephone (416) 586-5700.

The Main Building, 100 Queen's Park: (416) 586-5549
Sigmund Samuel Canadiana Building, 14 Queen's Park Crescent West: (416) 586-5524

Published three times per year by the Royal Ontario Museum
© The Royal Ontario Museum, 1998. Printed and bound in Canada
Indexed in the *Canadian Periodical Index* and the *Canadian Magazine Index* and
available on-line in the *Canadian Business & Current Affairs Database*
ISSN 0035-8495

Second class mail registration number 1531

SUBSCRIPTIONS AND SINGLE COPY SALES

Subscriptions \$11.97 (3 issues) plus 7% GST,
outside Canada add \$6.00 for postage and handling; single copies \$4.25 plus 7% GST
All circulation and subscription inquiries should be addressed to *Rotunda*,
35 Riviera Drive, Unit 17, Markham, Ontario L3R 8N4, (905) 946-0406

ROTUNDA STAFF

Sandra Shaul, *Executive Editor*
Peter Enneson Design Inc., *Design and Production*
Jennifer Little, *Administrative Assistant*

ADVERTISING SALES

Jory, High & Associates,
220 Duncan Mill Road, Suite 504,
Don Mills, Ontario M3B 3J5
(416) 447-7999, Fax (416) 447-8034

EDITORIAL AND MARKETING OFFICES

Rotunda, the magazine of the Royal Ontario Museum, 100 Queen's Park,
Toronto, Ontario, M5S 2C6, or telephone (416) 586-5590, fax (416) 586-5887
e-mail sandras@rom.on.ca
ROM web site: www.rom.on.ca

✧ EDITOR'S NOTE ✧

THE ABILITY OF MUSEUMS to tease our sense of wonder goes back to their origins in the royal curiosity cabinets of the 18th-century Enlightenment. These rooms provided public access to collections of intriguing examples of art, nature, and science from near and distant lands. In the 19th century, the Victoria and Albert Museum enhanced its role to become for the British public a centre of creative inspiration and education in the fine and applied arts. As such it kindled a worldwide museum building boom, which included the Royal Ontario Museum.



tobacco in the pipes, the Iroquois were able to make spiritual contact with the shaman.

Summer is a good time to travel and if you are considering a trip to Ottawa, a visit to the Peace Tower of the Par-

liament Buildings is a must. Part of its elegant architecture includes the Memorial Chamber with its outstanding stained-glass windows, built to commemorate Canadians who died at war. Shirley Ann Brown, director of the Registry of Stained Glass Windows in Canada, writes about the windows, created by Frank Hollister, which in addition to their public function, also represent some of the earliest examples of Canadian stained-glass produced according to the modernist aesthetic.

Ottawa may be a great place to be in spring, summer, and fall; however, I'd rather be in Bermuda in the winter. Much of Bermuda's economy is based on marine resources, which in turn provide support for the tourism industry. Two seamounts (underwater mountains) located off the island support important sport and commercial fisheries. Scientists from the ROM, Nova Scotia, and Bermuda, using a Canadian navy submersible, are conducting research on the ecology and biodiversity of these mountains to see how much fishing activity can be sustained. In his article, Dale Calder, a ROM biologist, describes what it is like to dive down to the mountain summits and what they found there.

I hope that this issue offers you some enjoyable warm-weather reading and that you make a special point of visiting the Royal Ontario Museum this summer.

Sandra Shaul

Sandra Shaul

This summer, the ROM is fortunate to be the only Canadian venue for the exhibition *A Grand Design: The Art of the Victoria and Albert Museum*, which showcases 200 examples of the V & A's diverse collections, including a late 15th-century Leonardo da Vinci notebook—backwards handwriting and all—and a sensational sassy 1996 Christian Lacroix gown. Michael Conforti's cover story about the founding of the V & A and a descriptive selection of objects in the show, excerpted from the exhibition catalogue, will give you a taste of what you can see.

On the subject of intriguing things, archaeologist Glenn Kearsley writes about 97 pipes in the ROM's ethnology collections, with bowls distinguished by a moulded pinched-face, hunch-backed figure. The pipes were all produced in mid-17th century Huronia, an area north and west of Toronto and south to Rochester. He speculates that the pipes represent the likeness of a powerful healer and shaman, Tonneraouanont, who became a very painful thorn in the side of the Jesuit missionaries trying to convert to Christianity the Iroquoian people of the region. By smoking the sacred

READER SERVICE

Questions ABOUT YOUR ROTUNDA SUBSCRIPTION?



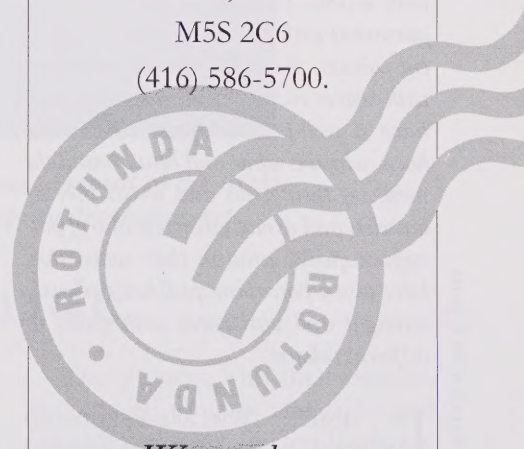
Call or write

Anne Nurse
at Rotunda
35 Riviera Drive,
Unit 17,
Markham, Ontario
L3R 8N4
(905) 946-0406



If you are a ROM member,

please contact
Membership Services,
Royal Ontario Museum,
100 Queen's Park,
Toronto, Ontario
M5S 2C6
(416) 586-5700.



*We are here
to answer
your questions.*



An Athapaskan belt, decorated with quills and Chinese coins, is a colourful and musical addition to the collections.

An Athapaskan Quilled Belt, Symbol of Success

Their robes and capots are ornamented with several bunches of leather strings garnished with porcupine quills of different colours, the ends of which are hung with beaver claws. About their neck they have a well-polished piece of caribou horn, which is white and bent around the neck; on their arms and wrists they tie bracelets and armbands made also of porcupine quills; around their waist they have also a porcupine quill belt curiously wrought and variegated with quills of different colours.

IN 1807, WILLARD-FERDINAND Wentzel, a fur trader, provided this detailed description of clothing and ornamentation worn by Slavey Indians. The Slavey and other Athapaskan-speaking peoples of the western Subarctic took great pride in

their clothing, which proclaimed their status and success within their group. For men, well-sewn and beautifully ornamented clothing was an indication of their accomplishments as hunters and trappers. For women, such clothing displayed their sewing and artistic skills as well as affection and pride for their families.

Living in the region of western Great Slave Lake and the upper Mackenzie River, the Slavey depended upon hunting, trapping, and fishing for their livelihood. For most of the year they lived in small groups near lakes where they could be sure of a good supply of fish while they hunted for moose and woodland caribou or trapped for such fur-bearing animals as beaver, muskrat, lynx, and marten. The Slavey believed that

their fortunes as hunters and trappers depended upon a respectful relationship with the animal world. It was believed that animals would give themselves to the hunters provided that the hunters respected the animals' bodies and shared their meat. Fine clothing and lavish ornamentation was a sign of a healthy relationship with the animal world.

A bird-quilled belt, recently acquired by the ROM through the generosity of the ROM Reproductions Fund of the Royal Ontario Museum Foundation and Joel and Ruth Greisman, is a rare example of this traditional style of clothing. This beautiful piece of adornment fits Wenzel's description of Slavey clothing.

Dating to the mid 19th century, the animal-skin belt is embellished

with a facing of vertically aligned bird quills dyed red, yellow, and turquoise to create a geometric pattern on a ground of naturally coloured quills. A skin fringe of 112 strands wrapped with natural and red-dyed quills hangs from the belt's

lower edge. In the central portion of the fringe, 18 of the strands are each decorated with a Chinese coin held in place by a glass bead. The coins and beads were acquired through trade, yet another measure of success. This belt drew attention to itself

and the wearer by being not only colourful but also musical.

KENNETH R. LISTER

Kenneth R. Lister is an assistant curator in the Anthropology Department, Royal Ontario Museum



A pair of beaded slippers and their original wall-pocket storage case, donated to the ROM, represent an interesting combination of Plains Indian and European decorative arts.

Slippers Fit for a Bride

THANKS TO A “NUDGE,” THE ROYAL Ontario Museum received as a gift a pair of Indian slippers in their original wall-pocket storage case from Mary Denoon. The nudge, as she put it, was a recent “Look Again” article in *Rotunda* about a pair of early 19th-century gold-

beaded moccasins. Produced by an Indian craftswoman in Canada, this beautiful slipper set is an exceptional example of “fancy work,” a British embroidery style that enjoyed tremendous popularity in England and abroad during the reign of Queen Victoria.

The slippers, with their diminutive curved tongues and right and left cobbled soles with low heels, are patterned after “Albert-cut” bedroom or boudoir slippers, which became popular in Britain about 1860. Mirroring the production process of the Victorian housewife,

Join the
scientists,
explorers,
artists,
historians,
archaeologists,
photographers,
who bring the
world to light.

JOIN US FOR A YEAR-LONG JOURNEY OF DISCOVERY

for as little as ten dollars a year!

To subscribe, please write to : Rotunda,

35 Riviera Drive, Unit 17,
Markham Ontario L3R 8N4

Or call us at

905/946-0406

*Be sure to provide your mailing address,
and let us know whether to send one year of Rotunda
(just \$11.97 plus GST) or two (only \$19.97 plus GST).*

ROTUNDA IS PUBLISHED THREE TIMES ANNUALLY

Subscribe to Rotunda today

the Native craftswoman would have made only the upper part of the slippers, while a local shoemaker would have added the soles. The uppers are constructed from deer or moosehide, "home tanned" in the traditional Native way: the hide was kneaded with the mashed brain of the animal and then smoked.

Wall pockets were an extremely popular accessory, tailored to hold such items as watches, letters, matchboxes, and footwear. They were a convenience that enhanced the decor and added a sense of opulence to the Victorian home. Typically, the wall pocket donated to the ROM is made of black velvet. The beaded floral imagery on both slippers and wall pocket is heavily influenced by European prototypes.

Why did a First Nations craftworker make a slipper set in the Victorian style rather than draw on Native traditions to create a pair of moccasins with carrying pouch? Part of the answer lies in the history of the slipper set. It had belonged to Mrs. W. C. Coots (Nan), Mary Denoon's friend until her passing in 1944 and in whose memory the set was donated. Albert Gibbons, Nan's father, was likely the first owner. He lived in Regina as a young man, for many years serving as secretary of The Regina Trading Company. Since the slippers were made for a woman, they were likely commissioned for Amy Gordon, who became Gibbon's wife in 1900.

Given this information, I invited Mary to visit the ROM ethnographic storage room in search of comparable items from the Regina area, which might shed further light on the slipper set. Here we located a shelf skirt bearing beadwork images remarkably similar to those on the wall pocket. The catalogue record noted that, along with a beaded footstool cover, it was obtained about the time of the Northwest Rebellion from Cree of Fort Qu'Appelle.

Mary, who turned 90 in February, remembered that in her youth such shelf skirts, known as valances

or lambrequins, were used to hide support brackets for mantels and small shelves holding books or knick-knacks. She recalled that, like the slipper set, such fancy work was commissioned from local Indian craftworkers for the wealthier homes. We found another collection from the same area containing many Victorian-style items, including slippers, wall pockets, purses with silk floral embroidery, and napkin holders beaded with conventional Plains Indian geometric de-

signs. This material was collected by J. B. Lash between 1886 and 1897 while he was the agent at Muskowpetung's Agency, which comprised the closest cluster of reserves to Regina, and was only eight or 10 kilometres from Ft. Qu'Appelle.

Norbert Welsh was a one-time buffalo hunter, who operated a trading post from around 1887 to 1904 some 16 kilometres from Fort Qu'Appelle. In his records he stated:

I bought all kinds of moccasins, embroidered in all colors, and trimmed with

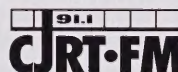
Probably the best radio programs
you'll ever hear.

You be the judge.

Classical and Jazz
Swing, Folk and Blues
University Credit Courses
BBC World Service News
Arts Coverage
and much more.

Listener Supported
No Commercials

91.1
CJRT-FM



For a Free Program Schedule call Toronto 1-888-595-0404

Rebuild an Empire

ROMAN OAK OF LONDINIUM

These elegantly turned columns are sculpted from the timbers of a Roman quay excavated at the site of Regis House, London, England, dating from circa the second century BC. Each piece includes a certificate of authenticity.

Available in the V&A Shop, June 21–September 13

Royal Ontario Museum, 100 Queen's Park (416) 586-5784

Altar Your Horizons

ROMAN OAK OF LONDINIUM

This Stonehenge replica is carved from the timbers of a Roman quay excavated at the site of Regis House, London, England, dating from circa the second century BC. Each piece includes a certificate of authenticity.

Available in the V&A Shop, June 21–September 13

Royal Ontario Museum, 100 Queen's Park (416) 586-5784

GROWING COLLECTIONS CONTINUED

weasel-fur ermine. They were of different styles. Some were made with tops, while others were slippers. The Indians brought them to me in big packs of twenty-four or forty-eight pairs lashed together with shag-gannappi [hide strips]. I paid from fifty cents a pair for them, according to the quality. Those for which I paid fifty cents, I sold for a dollar and a half, depending on the style and amount of decoration. The Hudson's Bay bought all my moc-casins. Some were sold in this country, and some were shipped to England.

Plains Cree, Plains Ojibway (Saulteux), and Dakota live on the reserves in the Qu'Appelle Valley today. The documentation and the artifacts relating to Nan's slipper set suggest that it was made at Muskow-petung Agency or at a neighbouring reserve, while the style of bead-work is most characteristic of the Cree or Saulteux. Welsh's description indicates that the Indians of the Qu'Appelle Valley made an impressive quantity of craftwork in both Victorian and traditional Native styles.

The presence of several simultaneous artistic styles may be understood in light of historical circumstances. In the earlier part of the 19th century many of the descendants of the Qu'Appelle Valley Cree and Saulteux lived in the wooded areas to the east and north of the prairies, where they learned European decorative conventions from missionary women. Just before signing Treaty Four in 1874, they lived in the Cypress Hills and surrounding high plains that now straddle the southwest Saskatchewan-Alberta border, where their woodland and European decorative traditions coalesced with the art forms of the Plains Indian culture. In this context, Nan's slipper set exemplifies one of several important socio-cultural forces which shaped the artistic creations of the Qu'Appelle Cree and Saulteux.

ARNI BROWNSTONE

Arni Brownstone is an assistant curator in the Anthropology Department, Royal Ontario Museum



Rhubarb

PSSST! TAKE A PEEK OUT THE WINDOW. If you grow rhubarb, it's jumping out of the ground like a weed. In our garden, it billows aggressively among bleeding hearts and peonies, a gangling, oversized mop of leaves on cherry-red stilts. Rhubarb has always been a wallflower. If anyone has ever said anything brilliant or memorable about it, you tell me. Unlike broccoli, it hasn't even been considered worthy of abuse.

The plant originated in Asia, likely northern China. But even there, omnivore gourmands who spent their prime time making gastronomic treats of everything that lives and breathes managed to give rhubarb the cold shoulder. The Chinese lumped it in with medicines, and for 5000 years relegated it to the unromantic role of purgative.

Rhubarb reached the West about

2000 years ago, and its name explains in part how it got there. It derives from the Latin *Rhabarbarian*, or "Rha of the Barbarians"—the river of the barbarians who cultivated it. The *Rha* in this case was the Volga and the barbarians, the Tartars. The Romans accepted rhubarb with little enthusiasm, and not even the normally verbose Pliny had anything cunning to say about it.

Yet it was a good traveller. The intrepid Marco Polo noticed the Chinese exporting it. The Arabs and Persians imported it and were the first to cultivate the stalks as food. It had reached Western Europe by the Middle Ages, but as a dried root, probably capable of vanquishing devilish spirits. The Europeans had no clue it could be eaten or even what it looked like in its natural form.

When Magellan circumnavigated

the world, his chronicler, Antonio Pigafetta, reported that he had found it in Siam and that it was "a large, rotted tree" whose "wood is the rhubarb." Pigafetta ran with it: "Twenty or twenty-five men gather together," he waxed, "and they go into the forest, and when night falls, they climb into the trees, as much to catch the scent of the rhubarb as from fear of the lions, elephants, and other wild animals. And the wind carries the odor of the rhubarb to them."

Apothecaries and abbeys seized upon rhubarb's root for medicinal purposes, but nobody was specific about *which* medicinal purposes. The English, of all people, were the first to contemplate eating it, even if they started with the leaves and likened them to spinach. This well-intentioned catastrophe was almost rhubarb's downfall. Its leaves con-

ILLUSTRATION BY OLEG KOULIKOV

tain oxalic acid, rendering the plant thoroughly unpalatable and theoretically deadly. The 19th-century cleric Augustus Hare, punished for succumbing to the "carnal indulgences" of a lollipop, was forced to consume a mix of rhubarb and soda.

Edible rhubarb as we know it arrived in Europe and the Americas between 1815 and 1830. The French sniffed at it. Dumas did not even mention it in his *Grand Dictionnaire de Cuisine*. The normally astute *Larousse Gastronomique* was positively dim-witted when it grudgingly acknowledged that "some species" were "cultivated as food plants," but it has since recanted, praising the plant's contribution to compotes and pies. During World War I, Americans consumed its leaves as a vegetable supplement, and there were many poisonings.

I can't think of a single rhubarb dish produced by 5000 years of Chinese cookery. The French still haven't much to do with it. The English, the Scandinavians, the Dutch, and the Germans do, happily. So do the Inuit and Afghans, who apparently consume it raw, while the Italians use it to concoct an aperitif known as Rabarbaro. The American contribution is an annual Rhubarb Fest, held every May, deliriously, in Intercourse, Pennsylvania.

Judging from its position in *A Century of Canadian Home Cooking* by Carol Ferguson and Margaret Fraser, Canadians are its biggest fans. Where other peoples eat rhubarb as a vegetable, Canadians treat it as a fruit and make the most of it. The cookbook rhymes off recipes from chilled rhubarb-and-summer-berry soup through compote and chutney to rhubarb custard pie. As you read this, strawberry-rhubarb pie should be an item at bakeries. Not to be outdone by the Americans, we have our own Eagle Lake Rhubarb Festival in Haliburton set for 11 July.

Nowadays rhubarb can justify itself by its healthiness. The tender, sour stalk is a magical wand of phosphorus, potassium, magnesium, iron, and vitamins. Along with such

elixirs as garlic and fatty fish, it has been revealed as a cholesterol exorcist. It contains only 16 calories per 100 grams, as long as you do not include the sugar which necessarily softens its jolting acid content.

Yet somehow, we haven't really given rhubarb a stellar turn. By con-



Enthusiasts watch stalk-car racing in the world's only rhubarb derby, which is part of the Kitchen Village Rhubarb Festival.

signing it to mundane roles I think we're missing the boat. It *has* to be more than the lower half of a strawberry-rhubarb pie. Instead of smothering it with sugar, we should embrace its sour disposition and turn it to our advantage.

Why not use it as a sauce for fowl, game birds, veal, venison, pork, and better still, a lovely, fatty roast duck? How about rhubarb wrapped in phyllo pastry and sprinkled ever so lightly with something sweet for dessert?

In a day or two, I'll plunder the garden in pursuit of slender, tender, pink young stalks whose flesh is aromatic and delicate-tasting. (Don't leave it until the last because older, thicker stalks display a coarse, watery consistency and insufferable acid). I'll pick it all; the surplus freezes surprisingly well, making for a sharp-tasting treat through the dull winter months.

Now I'm ready to go to town with rhubarb. My only hesitation is a reluctance to smother it in sugar. I *hate* sugar. Gratefully, I recall a technique invented by Xavier Deshayes, the

young chef from Languedoc, who has, for the past four years, been setting unprecedented standards at Truffles in Toronto's Four Seasons Hotel. Deshayes marries commoner rhubarb to the gastro-royalty of pan-fried *foie gras*. But first he must overcome rhubarb's bite. Does he reach for the sugar? Nah. He bathes it in *ice wine*. And presto, the 5000-year-old wallflower transforms into a princess. Carol Clemens offers some other tasty ways to prepare rhubarb.

SMOKED RACK OF PORK SAUCED IN RHUBARB

The sharp, sour rhubarb offsets the sweet, smoky flavour of the pork to make an exciting dish and a spirited start to the barbecue season.

When selecting a rack of pork choose one pink in colour with little fat and visible sinew. For elegant presentation ask the butcher to cut the ribs so that the last inch of bone is exposed. The rack should also be tied to keep the roast compact during cooking.

Ingredients

- 1 6-rib rack of pork, approximately 1.5 kg (3 lb)
- 15 ml (1 tbsp) sea salt
- 2 tbsp (30 ml) grated onion
- 1 tbsp (15 ml) crushed garlic
- 1 tsp (5 ml) dry mustard
- 3–4 cups (750–1000 ml) wood chips, soaked in water for 1 hour

Method

Rinse rack of pork quickly under cold water. Pat dry with paper towel. Combine next 4 ingredients and rub into the pork. Place pork and any remaining marinade into a plastic bag and seal with a twist tie. Allow to sit at room temperature for 2 hours or up to 6 hours in the refrigerator. Turn occasionally to redistribute marinade.

Using heavy-duty aluminum foil, make 2 loose, open-ended foil logs to contain the chips. Poke a few holes in each. Remove the grill from one side of a gas barbecue and turn the burner under that side to high. Place the packets of wood chips directly on the lava rock. Close the lid. When the chips begin to smoke (8 to 12 minutes), reduce the heat to

low. Try to maintain the temperature in the barbecue at 190°C (375°F) without turning on the second burner. If necessary, the second burner may be turned to low.

Place the rack of pork directly on the grill bone side down. Close the lid and smoke-cook for 50 to 60 minutes, until pork reaches an internal temperature of 60°C (140°F). Rotate rack occasionally to ensure even smoking.

Remove pork from grill, cover lightly with aluminum foil, and allow to rest for at least 5 minutes. The internal temperature of the meat will rise to about 65°C (150°F) during the rest period. Pork should be served slightly pink.

Cut between ribs with a sharp knife. Serve the thick chops with rhubarb sauce.

Makes 4 to 6 servings.

RHUBARB SAUCE

Ingredients

- 375 ml (1½ cups) chicken or veal stock
- 1000 ml (4 cups) finely sliced, tender, young, red rhubarb
- 250 ml (1 cup) fruity, off dry, white wine
- 30 ml (2 tbsp) corn syrup
- 30 ml (2 tbsp) butter
- 125 ml (½ cup) whipping cream

Method

In a medium pot, boil the stock until reduced to 125 ml (½ cup). Set aside.

Combine the rhubarb, wine, corn syrup, and butter in a medium pot. Cook, stirring frequently until rhubarb is reduced to a very smooth purée. Pass the mixture through a sieve, pressing with the back of a large spoon to extract as much of the rhubarb as possible. Return the strained mixture to the pot. You should have about 375 ml (1½ cups).

Add the stock to the rhubarb mixture and simmer until reduced to about 375 ml (1½ cups). Just before serving add the cream and heat just to the boil. Serve immediately.

Makes about 500 ml (2 cups).

JEREMY FERGUSON

Jeremy Ferguson writes about food and travel

©1997 The Trustees of the Victoria and Albert Museum.

Designed by Robert Adam.
Made by Thomas Chippendale,
1764-65.

Mention Chippendale and get a good seat.

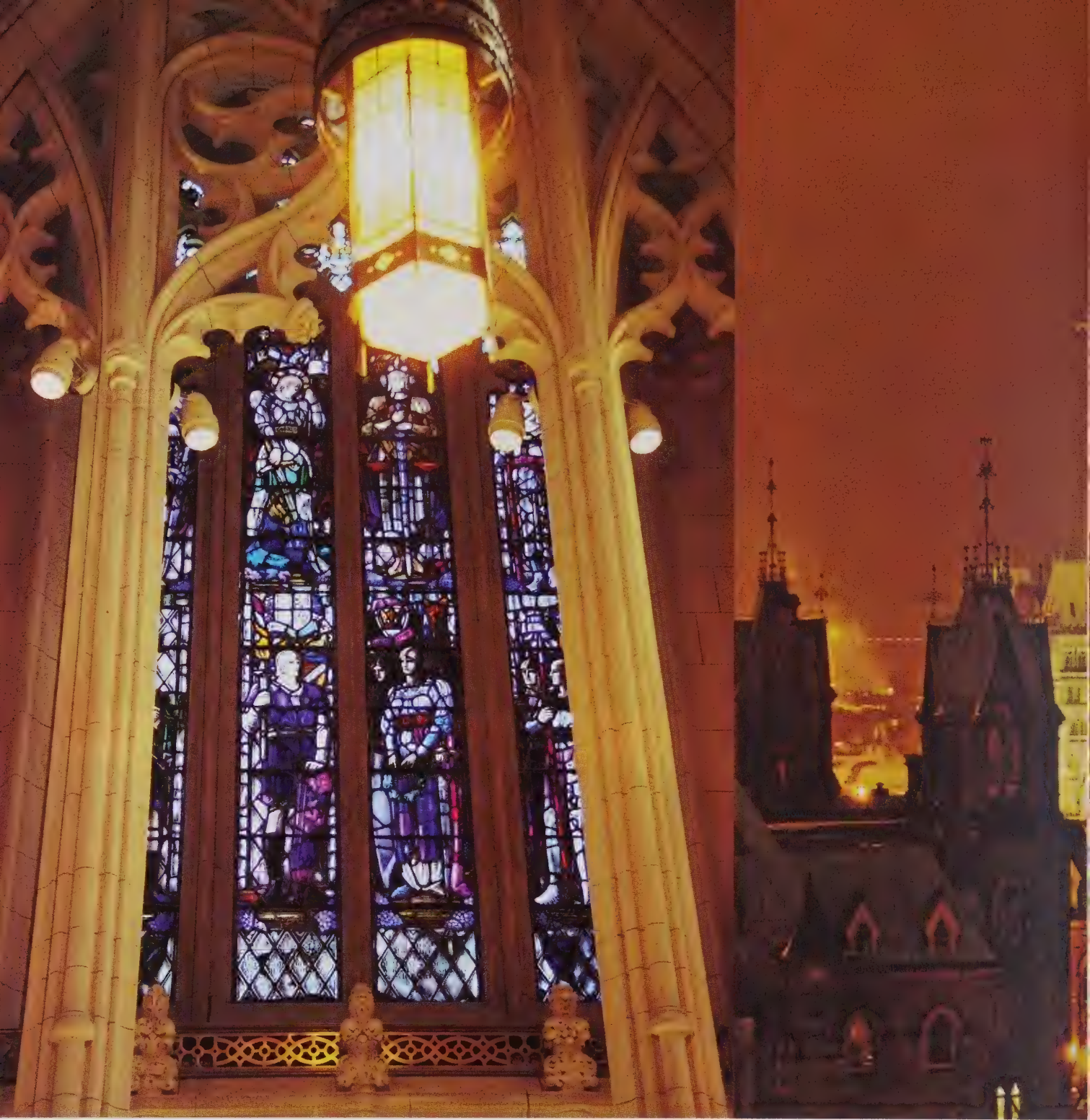
A Grand Design: The Art of the Victoria and Albert Museum
From Dickens to Donatello, see works by some of history's most famous names.

Opens June 21
Royal Ontario Museum

Promotional partner:
CROWNE PLAZA
TORONTO CENTRE

(416) 586-8000 • www.rom.on.ca • Tickets on sale now, call
TicketMaster (+16) 870-8000 • Organized and circulated by The Baltimore
Museum of Art • Tour sponsored by Visa USA and Lockheed Martin

Promotional partner
THE GLOBE AND MAIL



REMEMBRANCE

Stained-glass windows in Ottawa's Peace Tower are an innovative

SHIRLEY ANN BROWN



OF WAR

tribute to Canadians at war

THE BOOK OF REMEMBRANCE, WHICH records the names of 66,651 Canadians who lost their lives during the Great War, sits on an altar-table in the Memorial Chamber of the Peace Tower of the Parliament Buildings in Ottawa. An intimate space, measuring only 7.3 metres (24 feet) by 7.3 metres and rising 14.3 metres (47 feet) to the crown of the vault, the Memorial Chamber was officially opened to the

public by the prime minister, William Lyon Mackenzie King, on 11 November 1928.

The campaigns and battles in which Canadians were involved are represented by carved panels in 17 decorative niches, which overlay the chamber's lower walls.

Lighting this solemn setting are three large stained-glass windows, located above the niches. Facing east, south, and west, they transform the sunlight that floods into the room into shafts of invigorated, coloured light, which fall upon the central altar in transient patterns and hues from dawn to dusk. Constantly moving and changing, the light symbolizes life in the presence of death.

These powerful works in glass are artistic landmarks as well. They were among the first examples of stained glass based on the modernist aesthetic that were designed and produced in Canada. Their abstract and expressionist nature was a departure from the very traditional figural glass still more commonly produced in this country at the end of World War I. The only precedent in Canada was the modernist memorial window unveiled in St. Bartholomew's Church, Ottawa, in 1919, created

by Wilhelmina Geddes, an Irish artist, and produced in Dublin (see *Rotunda* volume 25, number 3, winter 1992).

John Pearson, the architect for the Memorial Chamber, commissioned Frank Hollister, a relatively unknown artist, to create the windows. Hollister became a champion for stained glass as an expression of the modernist aesthetic. In 1927 he wrote that "The character for design of stained glass windows should be symbolic, treated in a strictly decorative spirit." He complained about the dominance of "pretty sen-

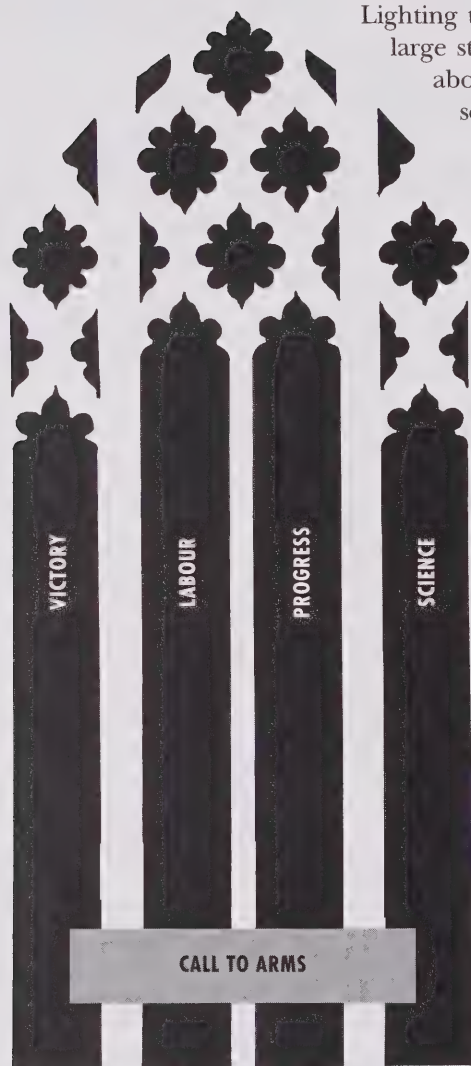
timent devoid of all artistic significance."

The Memorial Chamber windows were Hollister's first major commission as well as his first opportunity to bring his ideals to the attention of a broad public. He worked closely with Gladys Allen, a freelance designer and stained-glass artist, who had also worked with him on one of his earlier projects, the Ascension window for St. George's Anglican Church in Oshawa.

Beyond furnishing a mosaic of colour, the windows were intended to evoke in the viewer the sentiments of the nation in the aftermath of the terrible war. They would focus on the heroism of Canadians from across the land who had fought and died to ensure a promising future for their country.

Hollister explained his intentions in an essay submitted with his sketches in 1925. All three windows were to be united by a single theme. The provincial coats of arms and symbols of valour were to be inserted in the upper traceries. In response to the long narrow proportions of the main windows, figures would be placed in two tiers. Across the top half of each window, allegorical figures, arranged in single file, would represent "the underlying motives, ideals and principles, that evoked the activities, conditions and aims animating the common purpose, suffering and gratitude of the people, who bore the burden of war to a triumphant termination." The lower part of each window would "show a scene decoratively, rather than realistically expressed." The colour scheme would help viewers distinguish the allegorical figures, which incorporated a considerable amount of white glass, from the more strongly coloured figures along the bottom.

Upon entering the Memorial Chamber visitors first see *The Assembly of Remembrance*, the central window, located on the south



The Peace Tower shown on the preceding pages is flanked by details of the *Assembly of Remembrance* window to the left and the *Dawn of Peace* window to the right.



Shirley Ann Brown is associate professor and director of Graduate Art History at York University, Toronto, and director of the Registry of Stained Glass Windows in Canada

wall. Its composition is dominated by four figures. The top left figure represents the Archangel Michael carrying his trumpet as the invocation of the nation to the great cause of righteousness. Above his head a woman with children symbolize their inescapable inclusion in the defence of honour, liberty, and justice. The second figure is St. George slaying the dragon, a symbol of the triumph of right over might and of deliverance from the powers of darkness. The third, a winged figure, represents judgement and justice. The balances hang from the guard of the figure's inverted sword, which bears a figure of the crucified Christ. Together these images symbolize the suffering borne by the victors, as by the vanquished. The last figure portrayed is Joan of Arc, representing France and Quebec, and symbolizing the valourous role of women in war.

In the lower part of the window, a gathering of warriors stands watch over the dead. A female figure, wearing armour with a maple leaf on the breastplate and holding the victor's wreath, represents Canada. Behind her stand two more female figures, one symbolizing motherhood and the other representing Native Canadians. Canada is accompanied by a military "honour guard." To her left stands a soldier holding the crown of victory and at his feet rests a shield with the Pelican motif, which denotes self-sacrifice. Another soldier, bearing the torch of civilization's ideals, illustrates lines from John McRae's poem "In Flanders' Fields," inscribed on the stone wall below:

*To you from failing hands we throw
The torch; be yours to hold it high.
If you break faith with us who die,
We shall not sleep, though poppies grow
In Flanders' fields.*

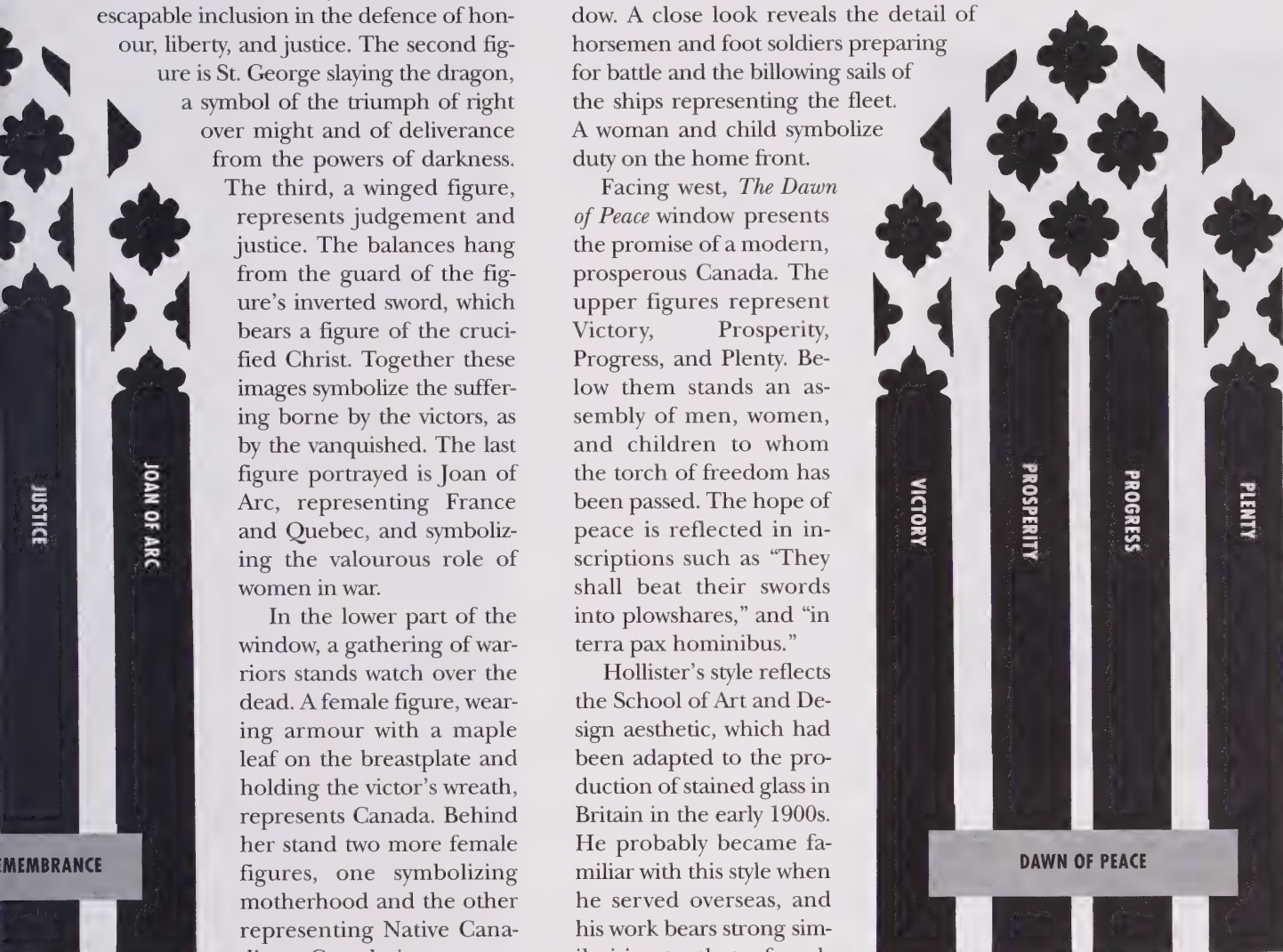
The *Call to Arms*, the east window, is illuminated by the morning sun. The upper row of figures and associated symbols represent the spheres of "industrial and intellec-

tual pursuits from which the fighting forces and co-operating bodies were assembled in the nation's service." The figures are labelled Victory, Labour, Progress, and Science. Warriors mustering at the trumpet call are seen in the lower section of the window. A close look reveals the detail of horsemen and foot soldiers preparing for battle and the billowing sails of the ships representing the fleet. A woman and child symbolize duty on the home front.

Facing west, *The Dawn of Peace* window presents the promise of a modern, prosperous Canada. The upper figures represent Victory, Prosperity, Progress, and Plenty. Below them stands an assembly of men, women, and children to whom the torch of freedom has been passed. The hope of peace is reflected in inscriptions such as "They shall beat their swords into plowshares," and "in terra pax hominibus."

Hollister's style reflects the School of Art and Design aesthetic, which had been adapted to the production of stained glass in Britain in the early 1900s. He probably became familiar with this style when he served overseas, and his work bears strong similarities to that of such British artists as A. J. Davies of the Bromsgrove Guild, whose five windows for the Memorial Chapel of St. Thomas' Anglican church in Toronto had been unveiled in 1922.

The backgrounds of Hollister's windows are filled with quarries (diamond-shaped panes of glass), often featuring small objects or designs. His compositions include a great variety of flowers and foliage, and in the rendering of his human subjects close attention was paid to details of clothing, such as bootlacing and leggings. Many English and Latin inscriptions are woven into the dense visual fabric. Hollister disliked the painted pseudo-medieval architectural canopies that were common to stained glass. He inserted decorative forms



Upon entering the Memorial Chamber of the Peace Tower, visitors first see the *Assembly of Remembrance* window, which faces south. To the east is the *Call to Arms* window, and to the west, the *Dawn of Peace* window.

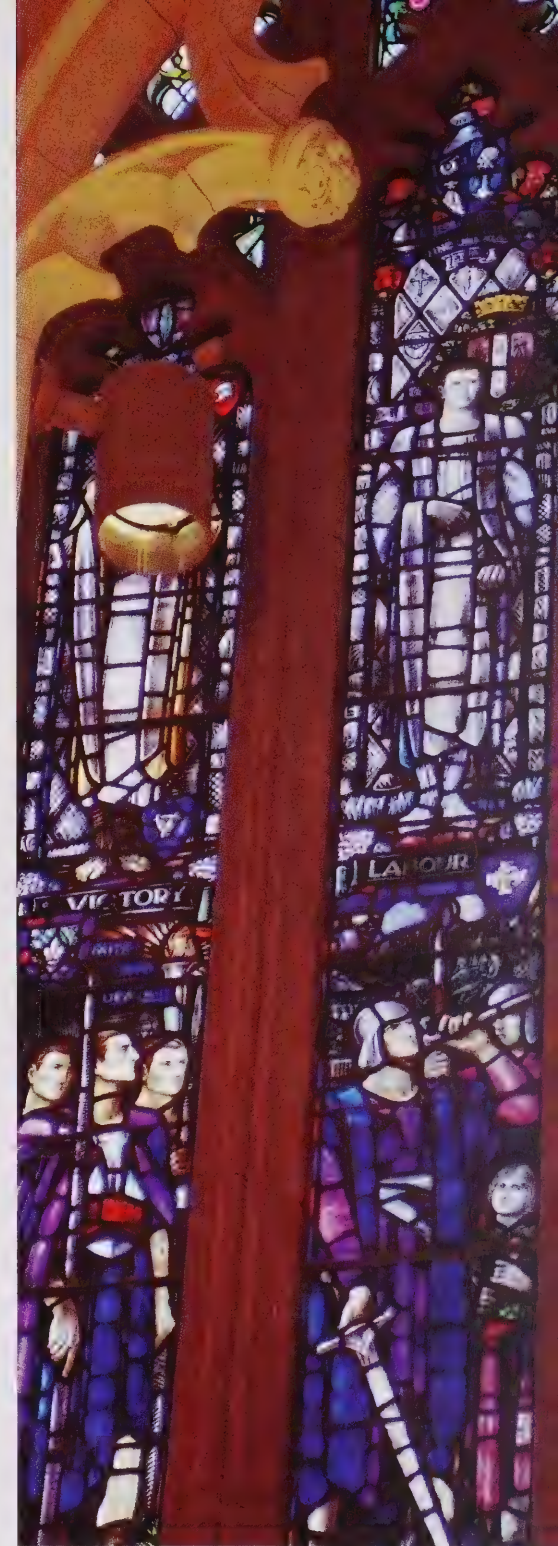
PHOTOGRAPHY BY SHIRLEY ANN BROWN

have a silvery sheen, which is enlivened with deep, rich colour. To temper the light shining through, the white glass is heavily painted, allowing the colours to stand out. All colour resides within the glass; variations are produced through the use of slab glass, streaky glass, and etching. Hand-blown, the glass was probably imported from England.

Following the modernist aesthetic of the 1920s, the figures in the windows are stiff and iconic. The upper figures, symbols of abstract principles, are portrayed frontally and still; the figures along the bottom of the windows illustrate human activity and are represented in motion and from various angles. Dress is a combination of Roman toga-like robes with medieval armour and tunics. The medieval knight exemplifies honour, bravery, justice, and self-sacrifice, while the values of democracy and responsible government are commonly equated with Republican Rome. Nevertheless, the figures present modern humanity with its stern, clean-shaven heroes, replacing the rather feminine Victorian ideal. Physiques and demeanours reflect gravity of purpose.

Some of the popular notions of war are reinforced, for example, heroic sacrifice. *The Call to Arms* shows people responding without question to the clarion call to serve a noble cause. The real story was somewhat different. After the heady response in 1914 to enlist in a war forecast to end within a year's time, the level of volunteers had to be maintained through a vigorous and multi-faceted propaganda campaign launched by the Canadian War Records Office.

Emphasis is placed on the timeless nobility of purpose in having fought and won a "just war." It was common for memorials associated with the Great War to use the medieval knight as the metaphor both for the dead soldiers and for the values that had led to their participation in the struggle. The spirit of condolence relied upon the conviction that Victory had been won through the sacrifice of fallen warriors who died for the common good, and that God had support-



Labour, one of the central figures in the upper register of the *Call to Arms* window, is portrayed as stiff and iconic in the modernist style of the 1920s.

ed the cause. Among the inscriptions on the Ottawa memorial windows are: "Fides Triumphans," "Thou hast girded me with strength unto the battle," and "Thanks be to God who giveth us the Victory."

St. George, portrayed in the central window of the chamber, frequently appears in Canadian war memorials as the sign of both ancient British chivalry and of the Christian struggle against Satan. The defeated dragon was equated with the hated Hun. This was a



fitting analogy, because Canadians had borne the brunt of the first gas attack by the Germans at the second Battle of Ypres on 22 April 1915, the eve of St. George's Day.

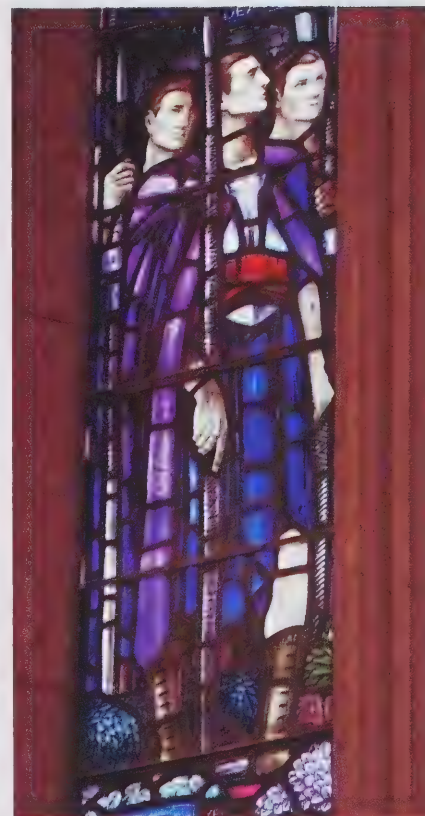
The continuation of a romantic, medieval-inspired 19th-century iconography in memorial art masked the grim realities of modern warfare and its effects on many of the veterans. It assured the Canadian public that the intolerable toll was a necessary price to pay for what was held dear. Once again in-

scriptions on the Memorial Chamber windows support this theme: "True worth that never knows ignoble defeat shines with undimmed glory" and "Freedom is the sure possession of these alone who have courage to defend it." The dead soldiers had earned an eternal place in national history and national grief. The inscription near the bottom of the central window reflects this sentiment: "At the going down of the sun and in the morning we will remember them."

Yet at the same time that the windows look to the past for their response to the war, they look to the future for the promise of a new era of progress and prosperity. There is direct reference to the burgeoning Canadian economy of the late 1920s, fuelled by the pulp and paper, mining, and hydro-electric industries. The figure of Labour in *Call to Arms* is accompanied by the words "Fortitudo," "Industria," and "Pax." Above the figure of Science are the words "Metallurgy," "Mineralogy," and "Chemistry."

The emphasis in *The Dawn of Peace* window is more on the wealthy agrarian sector of the economy. There is an abundance of foliage and fruit in its design. The figure of Prosperity bears a wheat sheaf and a hand-sickle; a male figure below her holds a larger scythe. Progress clasps a red-winged wheel. Plenty has a spread of fruits at his feet and in the book cradled in his right arm is inscribed, "intellectual riches of the written word." Peace and continuing prosperity are seen as the justification and reward for the sacrifice of thousands of Canadian lives.

The creators of the Memorial Chamber had as their goal to keep alive in eternal memory the sacred trust which is every civilized person's duty to defend. The Memorial Chamber is architecture for the nation. Over time, the Chamber has also been dedicated to the dead of the South African War/Nile Expedition, World War II, and the Korean War. What is most unusual is that this monument of government-sponsored public art also introduced modernism into Canadian stained glass and reflects the coming of age of the medium. ♣



In the lower register of the *Call to Arms* window, animated foot soldiers prepare for battle.

SOUTH KENSINGTON ITS ORIGINS

*The need for accessible collections to inform the public
about English decorative and industrial arts gave
birth to a revolutionary museum* MICHAEL CONFORTI

A Grand Design:
The Art of the
Victoria and
Albert Museum,
on view at the Royal
Ontario Museum
from 21 June until
13 September 1998,
is organized and
circulated by
The Baltimore
Museum of Art, in
association with the
Victoria and Albert
Museum. The exhibi-
tion is sponsored
by Newcourt Credit
Group and Chubb
Insurance Company
of Canada and
brought to North
America by Visa
U.S.A. and
Lockheed Martin.

PHOTOGRAPHY COURTESY THE VICTORIA AND ALBERT MUSEUM

THE CHARACTER OF THE ROYAL ONTARIO MUSEUM AS A REPOSITORY FOR BROAD, PUBLICLY accessible collections of the decorative arts was formed, to a great extent, through the influence of the Victoria and Albert Museum. Charles Trick Currelly turned to senior staff at the V & A for advice and inspiration relating to the collection policy and building design for the new museum that he was creating in Toronto. Currelly's successor as director of the Royal Ontario Museum of Archaeology in 1948 was Gerard Brett, an archaeologist, textile historian, and gifted young curator from the V & A.

The Victoria and Albert Museum was founded as the Museum of Manufactures in Marlborough House, in 1852, where it was affiliated with the School of Design. In 1857, it opened in its own building as the South Kensington Museum, which was renamed the Victoria and Albert Museum in 1899. Its founders saw the urgent need to create a resource for educating the public about the applied arts. So successful was the V & A in its enterprise that it became the catalyst for a building boom of art and design schools and museums throughout the British Empire, the United States, and Europe.

In the following excerpt from "The Idealist Enterprise and the Applied Arts" from the catalogue accompanying the exhibition *A Grand Design: The Art of the Victoria and Albert Museum*, author Michael Conforti describes the origins of the South Kensington Museum.

WHEN THE SOUTH KENSINGTON MUSEUM OPENED IN THE 1850s, PUBLIC EDUCATION was a benignly assumed but rarely stated goal of the many organizations that called themselves museums, whether these institutions focused on paintings or objects, and whether the objects were of aesthetic, historic, or scientific interest. The values of the Enlightenment had encouraged royal collections like those in Vienna and Dresden to be made publicly accessible in the last half of the 18th century. Dresden's collection derived from the mid-16th-century *Kunsthhammer* of Augustus the Strong. Literally translated from the German as "art room," but understood at the time as a "Cabinet of Curiosities," the *Kunsthhammer* was a collection of objects, usually intermingling examples from art, nature, and science, that were seen as novel, extraordinary, or wondrous. Dresden's was one of the first "working" or teaching collections, with areas provided to allow the king's craftsmen to work with its tools or study its holdings. Providing objects to bolster the royal image was the ultimate purpose of this training opportunity. Similarly, in 1708 when the German philosopher G. W. Leibniz advised Russia's Peter the Great to create a public collection "as a means to perfect the arts and sciences," Peter eventually embraced the idea with the words, "I want the people to look and learn." The ultimate goal of the St. Petersburg *Kunsthhammer*, however, like that of its earlier Dresden counterpart, was to advance the level of craft production at

*Michael Conforti is director of the Sterling and Francine Clark Art Institute
in Williamstown, Massachusetts*

Peter's ambitiously Westernizing court.

The political value of a public display of art also drove the founding in Paris of the most influential museum of the late 18th and early 19th centuries, the Louvre. In the spirit of the democratic ideals of the Revolution, the French royal collections were made available to all French citizens. The Louvre displays were not only splendid, but, like a handful of German collections of the time, were installed chronologically and by national school, with French painting maintaining a special pride of place. This politically useful bow to the pedagogical goals of the Enlightenment was expressed in French attitudes toward the useful arts and trades as well. The government-sponsored *Ecole des Arts Décoratifs*, an organization that still operates today, was founded in Paris in 1762 to train artists to work in industry. The institution in turn led to a regular series of exhibitions of industrial arts from 1798 on; and, in the wake of the Revolution, the *Conservatoire des Arts et Métiers* was established, a museum of industrial art that collected objects and explained their construction and use.

By the opening years of the 19th century a number of industrial training schools, societies, and collections of the "useful arts" had been established on the Continent. While they would sometimes later be incorporated into a city's South Kensington-style applied arts museum, as often as not they remained separate from the larger effort. England's privately organized study and support group, the Society for the Encouragement of Arts, Manufactures and Commerce, had begun in 1754. Open to both men and women from its founding, it regularly awarded prizes for exceptional work or deeds, and is still in existence today. Prince Albert was elected the Society's president in 1843. He met and was impressed by Henry Cole at Society meetings, some of which were convened to help organize the Great Exhibition of 1851. Albert's presence gave the Society new energy, for it had gone through its weakest period in the early decades of the 19th century, a time when Continental countries enjoyed established and sometimes government-supported industrial arts training efforts.

While the success of the future South Kensington Museum was ensured by the positive relationship that developed between Prince Albert and Henry Cole at the Society of Arts in the 1840s, the movement to establish Continental-style education programs in the applied arts had been initiated by a newly elected group of English reform politicians a decade earlier. Wondering how aesthetic education and industrial training might be worked into their own liberal mercantile program, they formed a parliamentary committee to investigate the problem. Gustav Waagen, director of the recently opened *Altes Museum* in Berlin, was prominent among those who testified in 1835 to this Select Committee. Its members were attracted by the reputation of Waagen's new museum, but they focused more specifically on the school of crafts and industrial arts that he oversaw. When asked about the Committee's primary purpose—what might be "the best mode of extending taste and knowledge of the fine arts among the people generally"—Waagen replied, "accessible collections." He further suggested that the Renaissance connection between workman and artist could be restored by organized educational efforts within such collections

... by giving the people an opportunity of seeing the most beautiful objects of art in the particular branch which they follow; by having collections of the most beautiful models of furniture and of different objects of manufacture . . . It is not enough, however, merely to form these collections; there must also be instruction to teach the people on what principles those models have been formed.

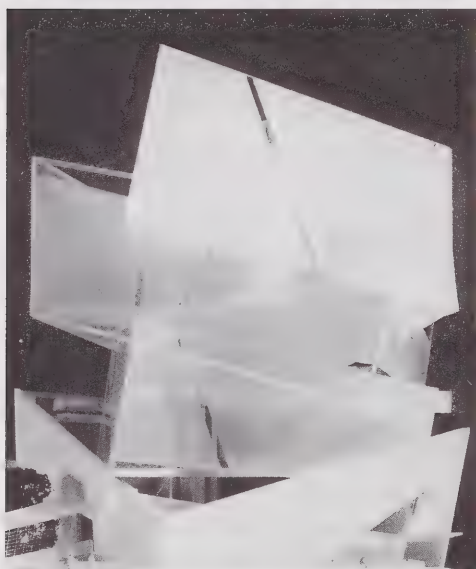
Top: Henry Cole (left), head of the Department of Science and Art, and Richard Redgrave, superintendent for Art, were central to the foundation of the V & A.



Middle: "The South Kensington Museum: General View," from *The Illustrated London News*, 27 June 1857.

Bottom: "The Loan Collection of Works of Art at South Kensington Museum," from *The Illustrated London News*, 6 December 1862.

Top: The new facade of the V & A in 1909.



Bottom: An early working model of architect Daniel Libeskind's Boilerhouse Project design. The Boilerhouse Project is a new building that will occupy the remaining undeveloped site at South Kensington.

Not only was it widely recognized that English art and design industries commanded little respect in the world, it was clear, too, that the museums and schools currently operating in England were not equipped to address the issue as Waagen had recommended. The National Gallery, begun in 1824, was still a private preserve for picture connoisseurs. It would not establish its reputation as an art museum until the third quarter of the century under its first formidable director, Charles Locke Eastlake. The British Museum had a decidedly academic orientation, limiting its collections, beyond ancient art, to objects of historical, scholarly, or ethnographic interest. Until reforms linked to increased government subsidies were initiated in the mid-1830s, the public it embraced was primarily "the curious" among the educated classes who had to apply for tickets in order to gain entrance, then only to be led around its disorganized array of specimens at a frantic pace and often in groups of five to 10.

The Select Committee realized that new institutions had to be established to reach its goal. A School of Design was chartered a few months after the Committee adjourned in 1836. While it initiated a collection in the 1840s, its teaching program was never considered a great success. The opportunity to address English design education arose again, however, in 1951 when, in the wake of the Great Exhibition, the School of Design was incorporated into a museum that opened at Marlborough House under the directorship of Henry Cole.

By 1853, with the museum and school incorporated into a newly named Department of Science and Art, an organized program of lectures and classes had begun. A staff also had been appointed, including artist Richard Redgrave, the designer Owen Jones, the erudite German expatriate architect and theoretician Gottfried Semper, and the young connoisseur John Charles Robinson. The government's charge to Cole and his colleagues was the reform of art and design training in England, a reform that would ultimately improve English goods from an artistic perspective, enabling the country to compete more favorably in foreign markets. What resulted was a museum and associated teaching program brilliantly innovative in adapting that directive to a broader educational purpose, all the while remembering its given audience of artisans, designers, and manufacturers.

From 1857, Cole's Museum at its South Kensington site became the most imitated and programmatically influential museum of the late 19th century. During its first 25 years of operation, the South Kensington Museum's commercially driven mission came to be inextricably integrated with contemporary social ideals associated with the belief in a practical, even moral, education for the working classes through their collective experience of art. This, in turn, had somewhat surprising results in the collections that were formed during the Museum's early years, a period when it virtually cornered the European market on important medieval and Renaissance sculpture and decorative arts.

The scope and ambition of the enterprise created huge audiences of domestic and foreign visitors, resulting in the widely held perception of the Museum's extraordinary success in reaching its goals. Importantly, this perception endured longer abroad than at home. Indeed, the Museum spent much of the last two decades of the 19th century extracting itself from charges of confusion of purpose arising, on the one hand, from conflicts between its government-mandated mission and the wide variety of collections it often was forced to display and, on the other hand, the staff's broad and experimental way of articulating the institution's exhibition and training program. It could even be argued that the legacy of this history of divergent expectation and reality affects the Museum to this day. ♣

The following is a selection of works from A Grand Design: The Art of the Victoria and Albert Museum. The stories are excerpted from the exhibition catalogue.



The Day Dream, 1880

Dante Gabriel Rossetti (English [London], 1828–1882).

Oil on canvas, 158.7 x 92.7 cm;

framed 195 x 130 x 12 cm.

Signed and dated "D. G. Rossetti 1880."

Bequeathed by Constantine Ionides.

Dante Gabriel Rossetti was born in London, the son of a refugee Italian scholar. Poet (as was his sister Christina Rossetti), painter, and designer, Rossetti had a profound influence on English cultural life of the period. One of the founding members, in 1848, of the Pre-Raphaelite Brotherhood, Rossetti is credited with bringing to the movement its interest in the symbolism and mystical spiritualism of the art and literature of the Middle Ages.

A friend of the American-born artist James Abbott McNeill Whistler, who lived and worked in London from 1859, Rossetti in his later years came to share Whistler's idealization of women; Rossetti took as his feminine ideal the image of his wife, Elizabeth Siddal, who died in 1862. (His impressive portrait of her, painted in 1864 and now in London's Tate Gallery, *Beata Beatrix*, was titled after the romantic memorial character of Beatrice in Dante's *The Divine Comedy*). The art patron Constantine Ionides visited Rossetti's studio in the late 1870s and saw over the chimneypiece the artist's large chalk drawing of Jane Burden Morris, the wife of William Morris, which inspired him to commission *The Day Dream* (the title taken from the poem of the same name by Alfred, Lord Tennyson), another highly romanticized female portrait and Rossetti's last masterpiece.

Ionides, whose grandfather had moved the family business of banking, shipping, and stockbrokering from Greece to London in 1815, was one of the principal collectors in England of contemporary art from the mid-1860s to his death in 1900.

Ronald Parkinson/Brenda Richardson

This spectacular dress—the most recent V&A acquisition represented in *A Grand Design*—was given to the Museum very shortly after its first appearance on Lacroix's catwalk in the autumn 1996 Paris fashion shows.

Christian Lacroix opened his haute couture house in 1986. His luxurious fashions, typified by this hooped evening dress, reflect an abiding passion for historical styles, ornate textiles, and elaborate decoration, all of which he translates in a contemporary idiom.

In a striking palette of acidic yellow and pastels, the dress forms part of Lacroix's "18th-Century Haute Couture Collection," which draws on a wide range of pre-1968 fashion references. Lacroix describes this collection as elegant and slightly disheveled: "Nothing seems to be held in place. The fabric is wrapped. It pirouettes around obstinately asymmetrical necklines."

Amy De La Haye



Evening Dress, 1996

Christian Lacroix, (French, born 1951).

Chiné-printed silk taffeta and lace,
embroidered with sequins, pastes, and beads,
150 cm long, 70 cm bust, 62 cm waist,
170 cm hoop max. diam.

Given by Christian Lacroix.



Queen Elizabeth I

c. 1595–1600.

Nicholas Hilliard,

(English, 1547–1619).

Watercolour on vellum, 8.5 x 6.5 cm.

Bequeathed by John Jones.

Painted when Elizabeth I was 60, this portrait by Nicholas Hilliard, the best known of English miniature painters, conferred on the queen a “mask of youth,” reducing her features to a few schematic lines and concentrating on her magnificent dress. This is not the portrait of an individual but an icon for a nation apprehensive about an aging, childless queen, a symbol of power not withered by time.

Although miniatures now have a place in national culture, Horace Walpole, an 18th-century owner of this miniature, set such early works against Continental standards and found them more alien than English. He wrote that painting Elizabeth I was as limiting to “genius” as painting an “Indian Idol.” The first miniature purchased by the Museum, in 1857, also of Elizabeth I by Hilliard, was in fact catalogued and displayed for its decorative case. At that time no English national museum had a brief to collect miniatures.

This Hilliard miniature was included in the Museum’s groundbreaking 1865 exhibition of miniatures and entered the V&A permanently in 1882. It was acquired as part of the John Jones bequest.

Katherine Coombs

In 1864 J. C. Robinson was particularly keen to supplement the Museum’s “comparatively poor” holdings of bronzes with examples from the Eugène Piot collection to be sold that April in Paris. He noted, however, that his own acquisitions of Italian sculpture for the Museum in past years were the main cause of the much higher prices that the finest pieces were likely to command. Much to Robinson’s annoyance, his recommendations were largely rejected by the board, both before and immediately after the sale, when other bronzes from the Piot collection were offered by London dealer John Webb. *Winged Putto* was one piece that the Museum did acquire at the sale, primarily as an example of bronze casting. At this time it was associated by Robinson with Andrea del Verrocchio (Italian, 1435–1488), but soon afterward it was classified almost unanimously as a product of Donatello’s workshop. Despite being described as merely from Donatello’s workshop, the bronze was regarded as such a major work that it was included in the Museum’s publication *Fifty Masterpieces of Sculpture*, published in 1951 (with a second edition in 1964). In 1977 a layer of corrosion and hard, black wax was removed, revealing the exceptional quality of the modeling and chasing, prompting Anthony Radcliffe, then an assistant keeper in the V&A’s Department of Architecture and Sculpture, to attribute it to Donatello himself.

Peta Motture

Winged Putto with a Fantastic Fish

c. 1435–40.

Attributed to Donatello

(Italian, c. 1386–1466).

Bronze, parcel-gilt,

40 x 40.6 x 10.6 cm.



Pair of Shoes

Autumn/winter 1993-94.

Vivienne Westwood (English, born 1941).

Bright blue punched leather "mock-croc" platform shoes, blue silk ribbon laces, platform soles, 23 cm long, 30.5 cm high.

Given by Vivienne Westwood.

The Museum's collection of shoes—like its larger 20th-century dress collection—has been primarily of haute couture examples. It has been only in the past few years that the Museum has sought to expand its shoe collection—recent acquisitions have ranged from 1940s cowboy boots to 1990s Converse Allstars designs, each chosen for its significance in the changing history of fashion in the shoe industry.

Revivalism has been a major theme in the design of 20th-century shoes. These shoes demonstrate a nostalgia that is manifest in creating new styles from old. Platforms, although seen as a new style in the 1930s—and subsequently revived in the 1940s, 1970s, and 1990s—had their origins in the chopines of the 16th century. The use of synthetics has also become more common in the last century, motivated both by technological innovation and by the scarcity of leather during World War II. Today, synthetics are often seen as an ethical alternative to leather, and companies like Vegetarian Shoes have begun to manufacture design classics—like the "Doc Martens" boot—in brightly coloured polyester.

Cathie Dingwall



The connection of objects to historical figures has often been based purely on legend and wishful thinking, but the Queen Elizabeth Virginal is an exception. Very similar to a Venetian example of 1571, it is decorated with both the royal coat of arms of the Tudors and the raven with the scepter, the personal emblem of Queen Anne Boleyn, the mother of Queen Elizabeth I (reigned 1558–1603). Since Elizabeth was noted for her ability to play keyboard instruments “excellently well,” it is quite possible that she used this very instrument. It was acquired in 1887 partly on account of these associations but also because of its musicalological interest. Its similarity to Italian spinets had been noted some 13 years earlier by Carl Engel, the Museum’s consultant musical specialist, in a period when musical instruments were acquired in their own right. The 1960s ushered in a revival of early music and with it an interest in early instruments; during this period, the V&A catalogued its musical collections and put them on display. Playable replicas of this virginal are much sought after by early keyboard specialists.

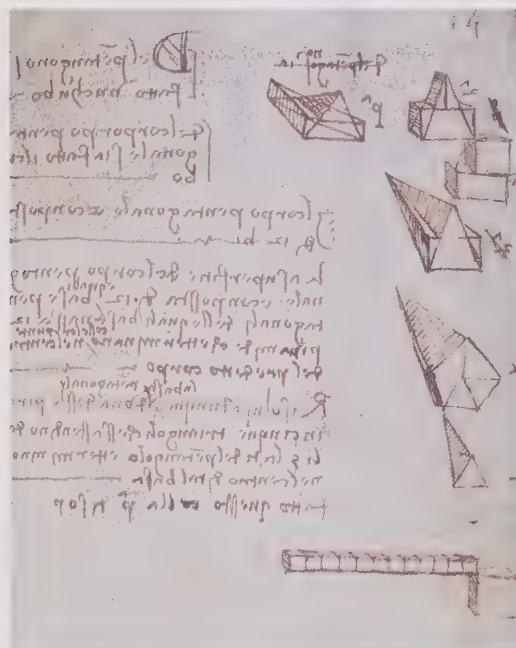
James Yorke

The Queen Elizabeth Virginal

c. 1570.

Italian (Venice).

Painted cypress wood case and soundboard,
parchment rosette, ebony and bone certosina keys.
160 cm long, 40.4 cm wide, 19 cm deep.



Notebook from the “Codex Forster”

1487–1490 and 1505.

Leonardo da Vinci (Italian, 1452–1519).

Pen and ink, 55 ff., 13.5 x 10.5 x 2 cm.

Bequeathed by John Forster, 1876.

The presence at South Kensington of works by Italian High Renaissance artists such as Michelangelo and Raphael would seem to make the Museum’s acquisition in 1876 of a work by their contemporary, Leonardo da Vinci, very appropriate. However, while its significance within a collection already renowned for its Renaissance holdings was clearly recognized, this notebook was initially displayed with other manuscripts—alongside examples of autographs—rather than with other Renaissance works.

This volume of the Codex Forster, composed of three volumes, dates from a period when Leonardo’s notebooks reveal an increasing preoccupation with mathematics; the contents of this notebook address the geometrical problem of transforming a solid or shape into another of equal volume or area. In treating a single subject at length, it differs from most of the artist’s other surviving notebooks (including the other two that make up the Codex Forster), which are fragmentary, containing isolated thoughts, observations, and sketches on a variety of subjects. As in some other Leonardo manuscripts, the notebook is written in mirror script; this has been attributed to his left-handedness and even to a desire for secrecy.

Rowan Watson

HEALING

*In a time
of crisis,
Iroquoians
used pinched-
face smoking
pipes to
appeal for
spiritual help*

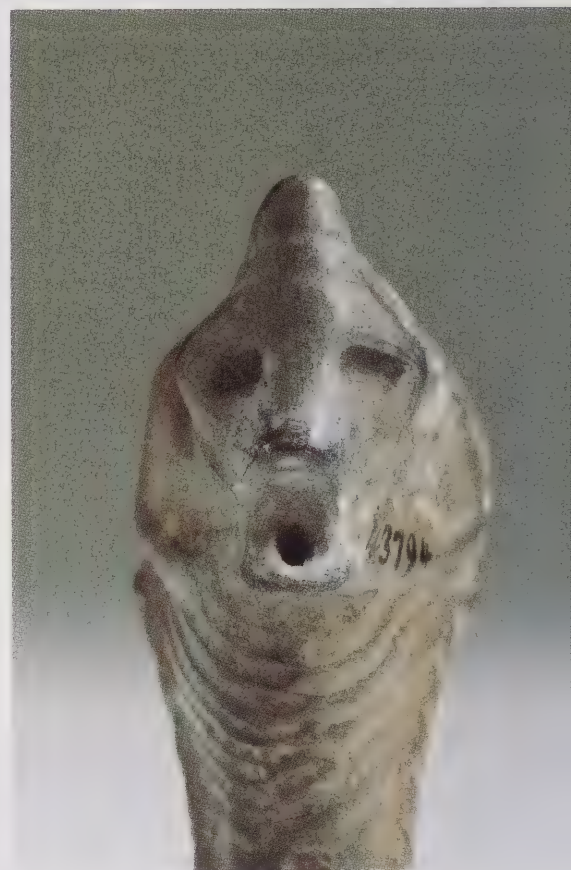
GLENN KEARSLEY

ONE OF THE MORE UNUSUAL COLLECTIONS at the Royal Ontario Museum comprises 97 Iroquoian smoking pipes with bowls decorated with hunch-backed, pinched-face figures. All of the pipes, as well as the almost 300 in other collections, seem to have been produced from about 1620 to 1650 in the Great Lakes region in an area running from north of Lake Simcoe south around the western tip of Lake Ontario, east to Rochester, New York. Given when they were made and their enigmatic, uniform appearance, the pipes may be associated with the spiritual war waged by Iroquoian-speaking peoples against the Jesuit missionaries, who arrived in the region about that time.

In the early 17th century, French explorers and Jesuit missionaries precipitated a period of rapid change among the Iroquoian-speaking peoples whom they encountered in the region of the southern Great Lakes. Native social institutions, which had been in place for nearly 1000 years, were threatened by the Europeans. Traditional native beliefs and world views were shaken by the spiritual challenge of Christianity. Diseases such as smallpox attacked the Iroquoian populations with epidemic force, reducing them by as much as half.

The Jesuit Fathers who lived among the Iroquoian populations were intent on converting the Natives to Christianity, thereby opening their societies to trade with France. Organized groups of Iroquoians reacted by openly denouncing the Christian faith as the sole cause of their misfortune. These groups intensified the practice of various traditional rituals and ceremonies in order to counteract the sorcery they felt was practised by the Jesuits.

One of the most powerful and influential figures in the Iroquoian traditionalist



movement was a shaman/healer named Tonneraouanont, who lived among the Wendat (Huron), an Iroquoian culture, until his death in 1637. He was described by the Jesuit Fathers as "one of the most famous Sorcerers of the country . . . although in appearance he was a little hunchback, extremely misshapen, [with] a piece of robe over his shoulders."

In spite of his poor physical condition, Tonneraouanont became a major obstacle in the missionary efforts of the Jesuits. He spent much of his time healing the sick through traditional medicine while denouncing the Christian faith. So it is possible

Glenn Kearsley, a masters graduate from Trent University, is an archaeological consultant

SMOKE



that the unusual smoking pipes represented Tonneraouanont and that communication between the shaman and the owner of the pipe took place through the act of smoking.

Tonneraouanont is first mentioned in a Jesuit account of the influenza outbreak



Smoking pipes with bowls decorated with hunch-backed, pinched-face figures may have represented a powerful shaman/healer named Tonneraouanont.

during the winter of 1636–37, which caused many deaths throughout Huronia. Several of the Fathers, bedridden with the flu, encountered the shaman when he came to heal the sick. According to the account, the “little hunchback” told the Jesuits:

I am not of the common run of men; I am, as it were, a Demon; therefore I have never been sick. In the three or four times that the country has been afflicted with a contagion, I did not trouble myself at all about it; I never feared the disease, for I have remedies to preserve me.

The shaman travelled from village to village healing individuals, entire communities, and, in one instance, all of Huronia. Jesuit records show that he was in high demand, with “entire villages bending to his decrees” in the hope that he would heal them and rid their longhouses of disease and misfortune.

Tonneraouanont was an exceptionally

PHOTOGRAPHY BY BRIAN BOYLE, ROM

*It was probably
Tonneraouanont's
forthright opposi-
tion to the Jesuits
that won him
the most stature
among the
Iroquoian
people*

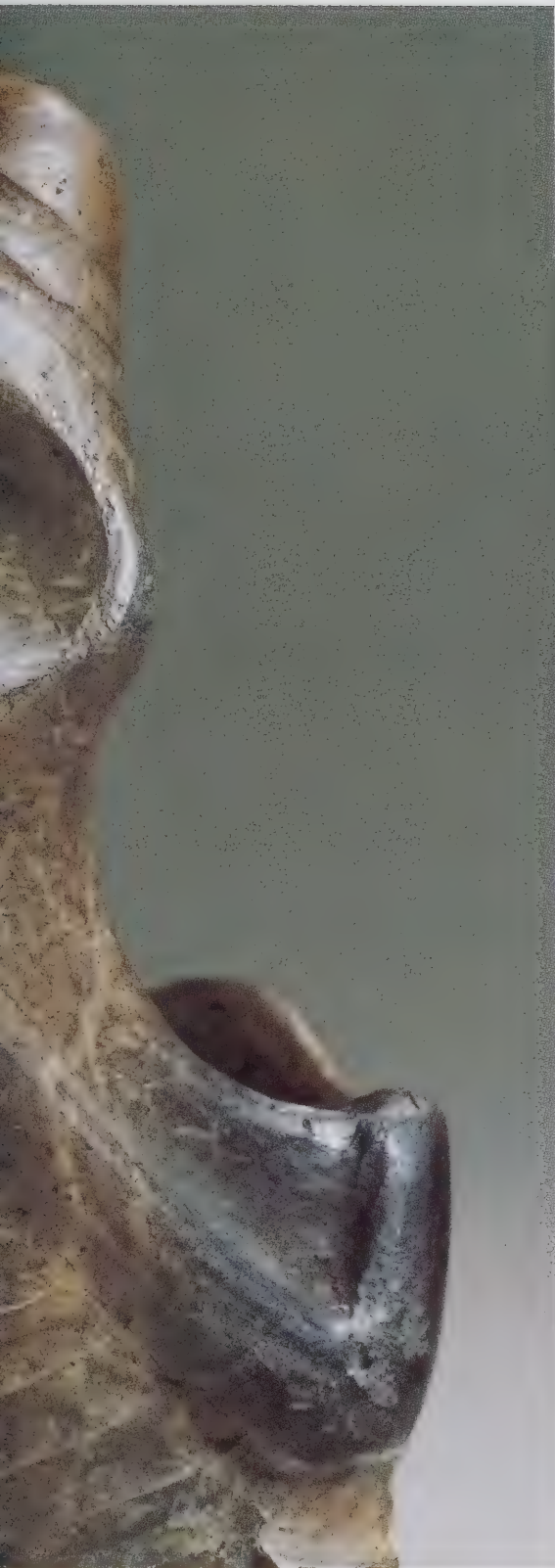


powerful individual in the eyes of the Wendat for several reasons. They believed that he was not born a human; rather he arose from the Underworld as a supernatural being with exceptional powers (the Iroquoians often associated physical deformities with mystical beings). Furthermore, according to the shaman himself, when he was young, children teased him because of his deformity and he responded by causing some of them to die. Ultimately he decided that he had to endure such ridicule so as not to destroy Huronia. That he turned his power to good use—traditional healing—earned him respect.

The shaman purportedly came from a Wendat village in the vicinity of La Fontaine



Hill, as it is known today. Overlooking western Huronia, this location would have been regarded as extremely powerful because it was closer to the Upperworld than anywhere else in the region. All spiritual matters of the entire Wendat Confederacy



Smoking pipes were and continue to be very spiritually charged objects in Iroquoian society. Once sacred tobacco is placed in the bowl of a pipe and lit, the smoker can make an offering to the various spirits and governing forces of the Iroquoian cosmos.



could be dealt with in full view.

However, it was probably Tonneraouanont's forthright opposition to the Jesuits that won him the most stature among the Iroquoian people. While the Fathers tried outwardly to downplay his im-

portance, the sheer volume of documentation of his activities—which fills 14 pages in the Jesuit *Relations*—suggests that he was indeed taken seriously. In fact, following one of Tonneraouanont's rituals, the Jesuits increased the number of masses “to exert ourselves with God, and to implore his divine goodness to confound the devil in the person of this wretch.”

Just before Tonneraouanont died on 25 January 1637, several weeks after an accident in which he slipped on ice, he asked to be carried to his home village on the mountain so that he could die in his birthplace. He also demanded to be buried in the ground so that, being a demon, he could return to his origins in the Underworld. Following his death, his reputation would have grown. He was a powerful tra-

ditional healer who returned to his Underworld abode atop one of the highest hills in the country, and he despised the Jesuits and all they stood for.

Fifteen days after the burial, another healer from Tonneraouanont's village travelled to a neighbouring village and, according to a Jesuit document, ordered a dance performed for the recovery of a patient:

All the dancers were disguised as hunchbacks, with wooden masks which were altogether ridiculous, and each had a stick in his hand. At the end of the dance, at the command of the sorcerer all these masks were hung on the end of poles, and placed over every cabin, with the straw men at the doors, to frighten the malady and to inspire with terror the demons who made them die.

The obvious parallels between this ceremony and that of the Iroquois False Face Society led ethnologist Harold Blau to equate the former as the origin of the latter. According to Blau, the 1637 dance, is the earliest mention of masked shamans demonstrating the hunchbacked posture. That it took place such a short time after the death of the original hunchback shaman, probably indicates that the imitation of this affliction was a way to emulate the once powerful and respected Tonneraouanont. Perhaps the shamans hoped to gain Tonneraouanont's powers or even to convince the disease-causing demons that he still lived among them.

In an account of the Iroquoian story of creation recorded by ethnologist J. N. B. Hewitt in the 1920s, one of the most important events is the battle between the Creator and a hunchback being called Hadu?i?', "the unborn primal being Disease and Death" and guardian of the False Face Society. While the Creator was out inspecting his earthly works, he encountered the hunchback on a "mountain standing in the distance." The two engaged in a struggle and the Creator won. Fearing for his life, Hadu?i?' offered his powers to aid human beings. Hadu?i?' claimed that his skin was full of *orenda* (magic power). Humans could recover from illness by imitating the form of his body as well as imitating the shape of his face through the use of False Face masks and by addressing him as Grandfather. Through the imitations, Hadu?i?' would be present symbolically to heal the sick. He is also reported to have said:

Native tobacco shall be one of the princi-

pal things . . . that they whom I greet as 'My Dear Grandchildren' will pledge their words with. So [when] one speaks, one shall hold in the hand that which I regard highly, native tobacco . . . One will cast native tobacco on the fire, then at that time smoke will arise therefrom. Then at that time it will be possible that I myself shall draw in the smoke . . . Then at that time the disease, sickness, will go away.

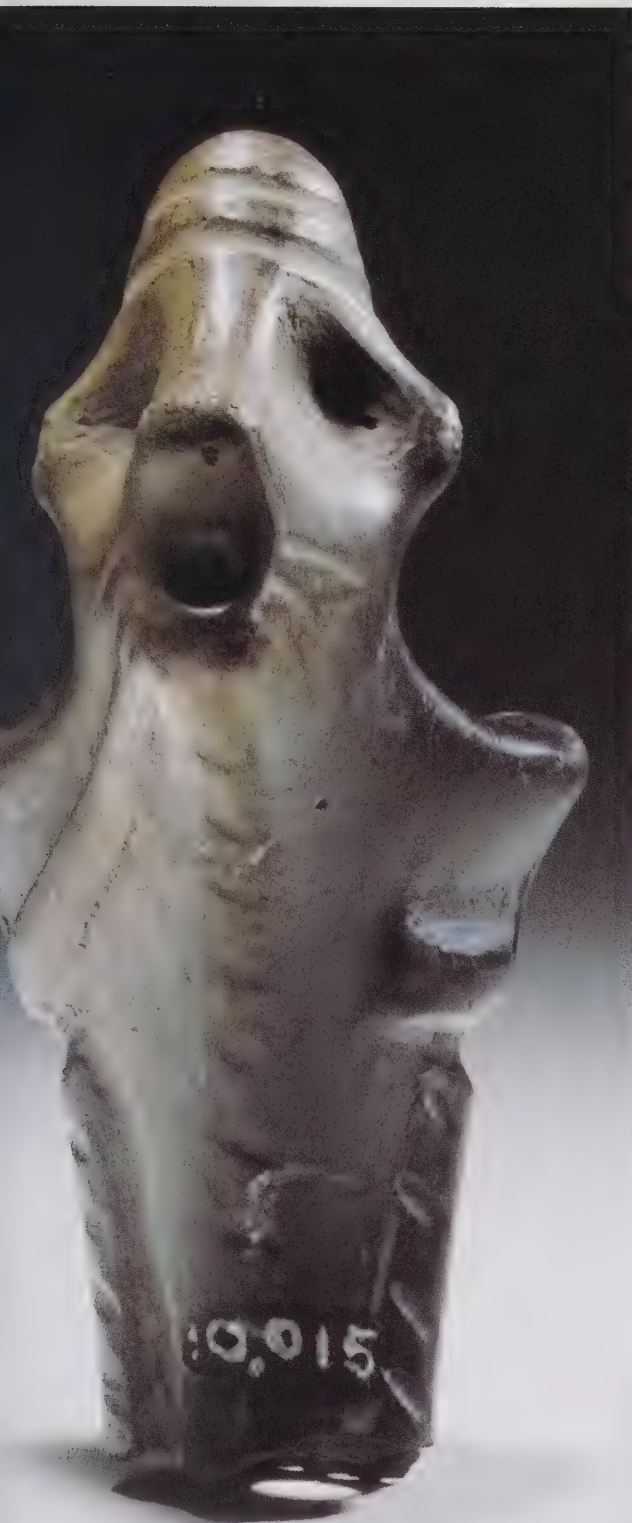
The Creator gave Hadu?i?' the task of riding the Earth of disease on the condition that he forever stay out of sight.

Tonneraouanont and Hadu?i? have much in common. Both were male hunchbacks, resided on a mountain, had enormous healing powers, and were imitated by dancers for the purpose of healing. The practice of soliciting the healing powers of the hunchback is still carried out by the Iroquois today through False Face dances. However, the story of Hadu?i?' also stated that the same healing powers could be solicited through offerings of tobacco, and it was during the 1630s at the time of Tonneraouanont's greatest popularity that the hunch-backed, pinched-face pipes suddenly made their appearance throughout Huronia.

As part of her 1978 research on Seneca False Face masks, Zena Mathews identified several of the symbolic attributes displayed on the pinched-face pipes, and concluded that they carry a number of shaman-like characteristics. These include the effigy's trance-like appearance, the facial expression of a shaman in the act of sucking (part of a 17th-century Iroquoian healing ritual in which the shaman sucked the disease out of the patient), the single cone-shaped protrusion on the effigy's head (generally associated with shamanistic and sacred powers throughout the Americas), and the skeletal motif (a widespread shamanistic symbol of death/resurrection associated with healing power). Furthermore, research into sign language, posture, torso design, and iconographic motifs on the pipes suggest that the pipe figures held a tremendous amount of knowledge and had the ability to traverse the Iroquoian cosmos to communicate with various spiritual realms on behalf of the smoker.

Smoking pipes were and continue to be very spiritually charged objects in Iroquoian society. Once sacred tobacco is placed in the bowl of a pipe and lit, the smoker can make an offering to the vari-

Through the
pinched-face
pipes
Tonneraouanont
could be present
spiritually if not
physically in
every village
of Huronia



ous spirits and governing forces of the Iroquoian cosmos. The effigy on the pipe bowl enables the smoker to direct his offering to that particular being or spirit.

Smokers of the pinched-faced pipes would have blown the smoke back at the effigy as an offering, and the sucking gestures

Smokers of the pinched-face pipes would have blown the smoke back at the effigy as an offering, and the sucking gestures portrayed on the effigy symbolized the spirit receiving it.



ture portrayed on the effigy symbolized the spirit receiving it. The smoke rising from the bowl, wrapping itself around the effigy's head before floating upwards in a single column, symbolized communication with the other realms.

Although it is known that Tonneraouanont travelled to some of the villages in westernmost Huronia, there is no evidence that he visited other more distant regions. But through the pinched-face pipes, he could be present spiritually if not physically in every village to heal those suffering from the epidemics of the 1630s. ♡

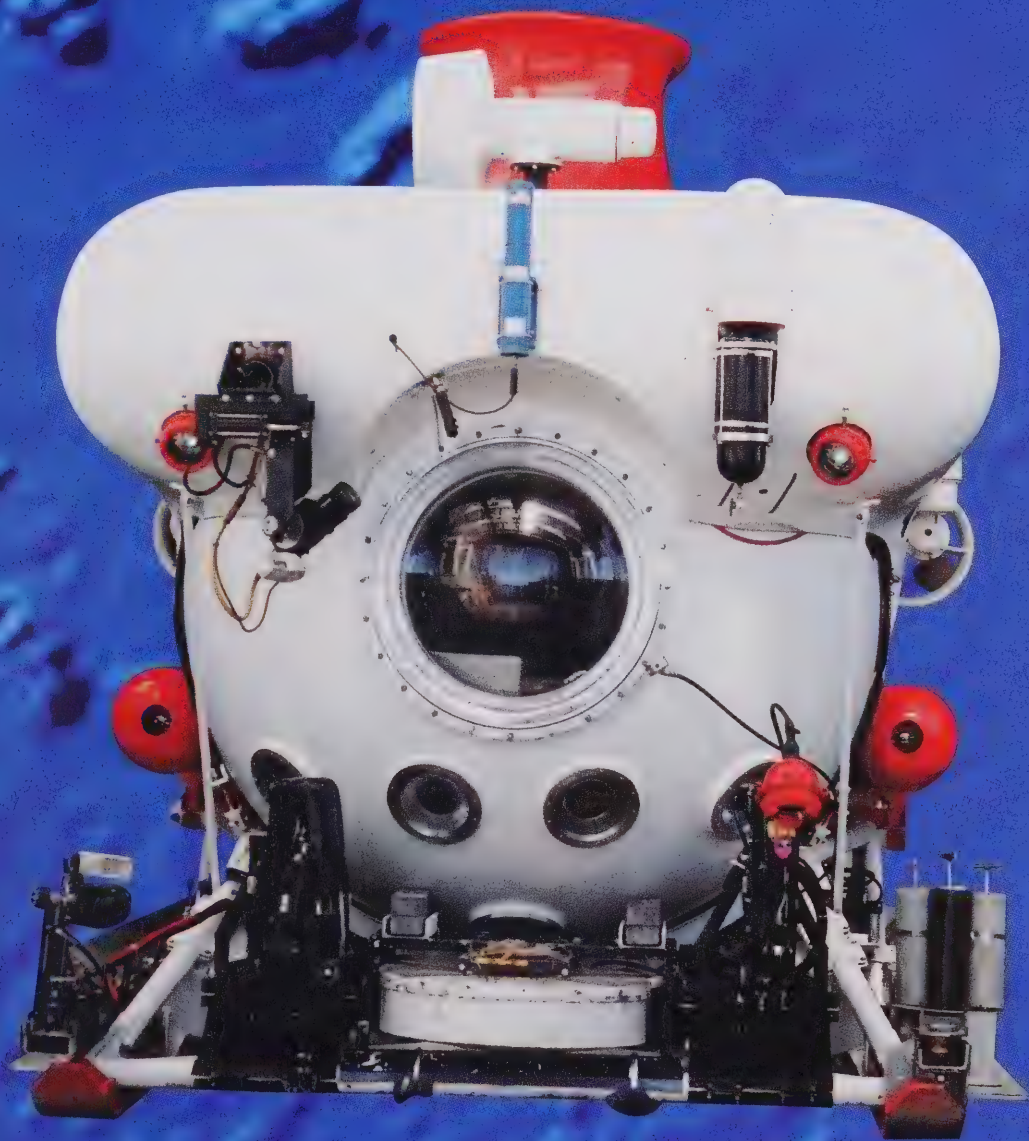
*FROM
research on
Bermuda's
seamounts
opens a
window
to a
previously
unknown
underwater
world*

DALE CALDER

D E S C E N D I N G
T O T H E
M O U N T A I N S
U N D E R T H E S E A

T

THE BOTTOM OF THE DEEP SEA



ANYTHING BUT UNIFORMLY FLAT. ABYSSAL PLAINS AND LOW HILLS ARE

LOGBOOK ENTRY OF A DIVE

Tuesday, 25 February 1997

Under sunny skies, mild temperatures, and gentle breezes, the 2100-tonne HMCS *Cormorant* puts to sea from Bermuda. By early afternoon we reach our dive site off Hungry Bay on Bermuda's south shore. This exercise is primarily a gear test although we also want to observe and collect invertebrate animals on the offshore slope of the island. Lieutenant-Commander Garrett Reddy, the commanding officer, leads a crisp military review of the dive plan. Then Wolfgang Sterrer, Robbie Smith, and I, with pilots Tyrone David and Dale Sylvester, squeeze into the tiny submarine. With hatches closed, we are eager to go.

Winched slowly out of the hangar, SDL-1 is lifted over the stern of the ship. We swing back and forth briefly as we are lowered into the ocean with a splash. Following instrument checks, a short radio exchange with *Cormorant*, and a thorough check for leaks, we are totally disengaged from the ship and ready to dive.

The oxygen supply is being released and a constant drone tells us that the carbon dioxide scrubber is functioning. Ballast tanks fill with water allowing us to descend towards the bottom, a half-kilometre below. The gorgeous turquoise hues of the surface water gradually give way as we dive through ever-deepening purple to virtual blackness. I try to remain nonchalant, reminding myself that we are only down a few hundred metres. Everyone seems cool and relaxed. For all of us this is a rare and glorious opportunity.

We overshoot our target slightly and sink somewhat deeper than planned, but as the sub's exterior lights are switched on we finally see the sea floor beneath us. SDL-1 lands on the bottom, settling at a sharp angle, causing us to hang on as if we were on a roller coaster. We are definitely on a mountainside. Our calm is replaced by sheer exhilaration and anticipation. The pilots balance the sub using the ballast system, and contact *Cormorant* by radio.

Everyone searches for signs of life outside. At this depth, beautiful Bermuda is stark black and white—pitch-black beyond the beam of light from the sub, snowy white from a sediment-covered bottom. Very little life can be found—a few crustaceans, sea anemones, sea fans, and black corals. Continuous videotaping of the bottom by an externally mounted camera is supplemented periodically by tape shot from our handheld cam-

corders pointed out through the viewport. We jostle for a bit of room in the cramped, dark personnel sphere, where we scribble notes with the aid of flashlights and ask the pilots to pick up sediment samples and specimens for us using the two externally mounted manipulators. The samples are stored in a rotating and compartmentalized sample holder in front of the sub. This is a very slow and tedious process. With five people constricted in the tiny forward personnel sphere (less than 3 metres in diameter), it is getting hot and damp. I wriggle out of a sweater and discard a woollen watch cap.

After a half-hour at this depth we begin ascending the slope, stopping to collect again at about 200 metres. Here, on a rocky ridge running upslope we see fishes, sponges, a fragile white coral, and a hermit crab. Onwards and upwards, climbing back to the natural light we encounter an impressive 30-metre-high rocky precipice located about 150 metres below the surface. A final stop on our climb is made at 40 metres where there is a coral-reef ecosystem. The different zones of life that we witness—from the desolate black-and-white world at 400 metres to the rich, diverse multi-coloured coral garden at 40 metres—are truly extraordinary.

Battery power in the sub is now low. *Cormorant* is contacted and the pilot requests permission to surface. Response is affirmative. We are warned to plug our ears as a sudden explosive burst of air forces water from the ballast tanks. The submersible rises straight up from the bottom to surface into bright daylight, surrounded by a mass of bubbles and bobbing like a cork in the waves. As we wait to be picked up, we towel down the inside of the personnel sphere, which is dripping with moisture. SDL-1 is secured by a line and pulled backwards to the ship for recovery. The submersible is raised and, with a bang, we land on deck. Then we are towed back inside the hangar. Our ears pop as the hatch is opened, and we crawl out to fresh, cool air. After three hours inside the sub, cheek-by-jowl, it feels good to get out and stretch. Now the rush begins to sort samples, place live animals in seawater, and ensure that all is appropriately labelled.

Many thanks to the people of the Canadian Navy, our gracious and highly competent hosts.

DALE CALDER

punctuated by massive mountains. In all the world's oceans, in regions where the crustal plates of the Earth's rigid outer layer merge, material from the Earth's mantle wells up through the fault to form mountain chains where upthrusting takes place, and where new crust is formed. One such chain, the Mid-Atlantic Ridge, bisects the Atlantic basin from Greenland almost as far south as the Antarctic continent. Maximum ocean depths are reached in trenches formed when one crustal plate converges with another and the edge is subducted (forced downwards) into the Earth's mantle. The deepest of these canyons, the Marianas Trench in the western Pacific, extends more than 11,000 metres below the surface. Even Mount Everest would be submerged here.

Active or extinct undersea volcanoes are a prominent feature of all ocean basins. When their peaks extend above the sea surface, islands such as the Azores are formed. Those remaining totally submerged are referred to as seamounts. Great Meteor Seamount, west of the Canary Islands, is one of the largest, four kilometres high and 100 kilometres in diameter at its base. More than 30,000 of these undersea pinacles are believed to exist, and they are especially abundant in the Pacific Ocean.

The bases of seamounts range from round to elliptical, their slopes are frequently steep, and their tops are often flat, occasionally sloping. Those with flat tops, also known as guyots, may have reached the surface and then been subjected to erosion at some time in the past. Many now lie hundreds or even thousands of metres below the surface, presumably as a result of the ocean floor settling beneath them. Those reaching within 200 metres of the surface are called oceanic banks. Scientists have only recently started to study seamounts in detail and so the biology of these formations is poorly known.

Aside from being of interest to biologists, some seamounts are of direct economic value for their marine resources. Off the island of Bermuda, two oceanic banks support important sport and commercial fisheries for spiny lobsters as well as for wahoo, blue marlin, mahi mahi, and various species of tuna. Yet little is known about the ecology of these banks and how much fishing pressure they might reasonably support. During the winter of 1997, an opportunity arose to explore the two banks by submersible. Working together, scientists from the ROM, the Bedford Institute of Oceanography (BIO) from Nova Scotia, and the Bermuda Underwa-



Pictured on the preceding pages, SDL-1, the Canadian Navy submersible, was used for dives off Bermuda and two nearby seamounts during 1997. The satellite map shows Bermuda and the nearby seamounts. HMCS *Cormorant* (above) served as support for the submersible.

ter Exploration Institute (BUEI) received permission from the Canadian Navy to carry out scientific studies in conjunction with HMCS *Cormorant* training exercises. Some of the training involved deployment, operation, and recovery of the ship's five-person submersible, SDL-1 (Submersible Diving Lockout-1).

Steve Blasco of BIO and his team of geologists wished to investigate sea-level changes using Bermuda as a benchmark. Meanwhile, the ROM's objective was to study the biodiversity and ecology of Challenger and Argus banks, located approximately 22 and 37 kilometres south-

Dale Calder is a curator in the Centre for Biodiversity and Conservation Biology, Royal Ontario Museum

west of Bermuda. Our collaborators included Wolfgang Sterrer (Bermuda Aquarium, Museum and Zoo), Robbie Smith (Bermuda Biological Station), Brian Luckhurst (Bermuda Department of Fisheries), and Jack Lightbourn (Bermu-

North Atlantic. Although both banks are volcanic in origin, they probably have been dormant, like Bermuda, for 33 million years or more. Their summits are nearly flat and irregular in outline. Challenger varies from about 8 to 12 kilometres across, while Argus is slightly smaller.

Almost all that is known about the biology of either bank dates from 1873, when dredging was carried out on Challenger Bank during the expedition of HMS *Challenger*. From earlier geological studies, and from our own work dredging for invertebrates, we were certain that no basaltic (volcanic) rocks would be evident on the banks. Instead, the volcanic rock is covered by substantial limestone deposits so that each bank looks like an inverted cupcake covered by a layer of frosting.

Following a preliminary practice dive off Bermuda (see sidebar), four dives were made off each of the two seamounts. During these dives, observations were recorded, samples collected, and video recordings made along a two-kilometre-long transect of the bottom. It appears that the two banks are very similar ecologically.

In the exceedingly clear Sargasso Sea waters, enough daylight reaches the flattened summits for a few species of reef-building corals to grow. Ledges along the tops of the banks are of low to moderate relief, with less diversity of species than is found on the shallow reefs around Bermuda. The inhabitants, besides corals, are sea fans, sponges, sea anemones, spiny lobsters, hydroids, starfishes, and algae. Fishes are abundant, diverse, and spectacular. Conspicuous by day, they are noticeably less so by night, when many appear to hide in the crevices of the reef.

Innumerable cannonball-shaped concretions of calcium carbonate, called rhodoliths, cover much of the bottom of the banks. These peculiar, spherical

Well-camouflaged, a spiny lobster (*Panulirus argus*), is encountered by SDL-1 at a depth of 70 metres during a night dive on Challenger Bank.



Two mechanical arms or manipulators on SDL-1 allowed recovery of samples for study. Here, a rock with attached invertebrates from Argus Bank is held in the jaws of a manipulator. A pair of jacks (*Seriola* sp.) patrol in the background.



da Underwater Exploration Institute).

Challenger and Argus rise from the abyssal seafloor to within 50 metres of the surface in the Sargasso Sea of the

"rocks," formed by coralline algae, create a loose, crimson-tinged pavement across flat fields, through ribbon-like channels, and sometimes over parts of the reefs. Sandy sediment is found in depressions and in elongated swales between the reefs. Sandy bottoms were less extensive than rhodolith fields, and where sand exists there is little life.

We concluded that Challenger and Argus banks provide habitat for a moderately diverse invertebrate fauna, for algae, and for a rich assemblage of fishes. They also provide shelter and feeding grounds for numerous coastal and oceanic species of fishes, sea turtles, and even migrating whales, as well as a nursery for their young. Most of the indigenous species are known to occur as well off Bermuda, while some live only on the banks. Neither bank seems capable of supporting intensive fishing activities.

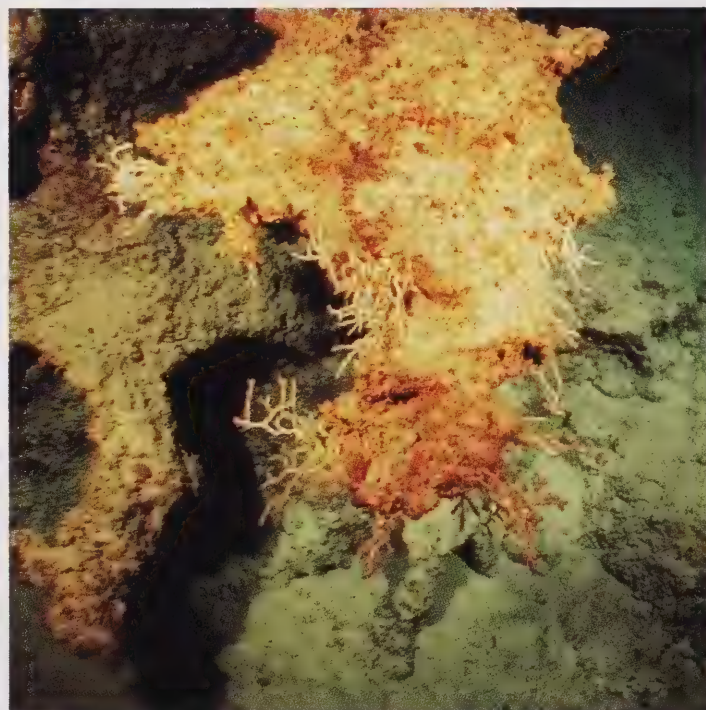
On both seamounts, traveling the last few metres of slightly sloping bank to pass over the edge into open ocean waters was unforgettable. As we dropped over the rim, the sight of the awesome blackness of the deep sea was a heart-stopping experience. Working 150 metres down the slope, we faced walls below the bank edges covered by limestone rock and rhodoliths fused together, flowing down from the rim like a glacier. Occasionally blocks of limestone break loose from the slope and avalanche into the depths and strong water currents made navigation tricky. Sea fans, stony corals, black corals, and starfishes line the walls, and Adanson slitsnails, coveted by shell collectors, were discovered in the crevices. Fishes, which congregated in substantial numbers near the rim, perhaps finding food in upwelling currents, were also frequently found on the wall.

Canadian and Bermudian scientists continue working together to analyse samples and videotapes in order to learn more about Challenger and Argus

seamounts. Thanks to the Canadian Navy, much more is now known about the ecology and biodiversity of these banks, as well as seamounts in general. And in a letter to Prime Minister Jean Chrétien dated 18 March 1997, The



A metre-long jack (*Seriola* sp.) swims in front of SDL-1 at a depth of 70 metres on Challenger Bank. Challenger and Argus banks support Bermuda's important recreational and commercial fishing activities.



Two hundred metres beneath the ocean surface is life in the twilight zone. A tangled mass of fragile white branches of a deep-water coral (*Madrepora carolina*) overgrows honeycombed limestone rock on the rugged and steep offshore slope of Bermuda.

Honourable David J. Saul, then Prime Minister of Bermuda, characterized the project as a great example of cooperation between two Commonwealth countries. ♡

Volcanoes, Stormy Weather, Archaeological Adventure, Dictionaries, Cities, Hans Holbein, and more

The book **Volcanoes: Crucibles of Change** (Princeton, US\$35) appeared at about the same moment that a volcanic eruption threatened to drive away the entire population of Montserrat, the British colony in the Caribbean. The authors—Richard V. Fisher, Grant Heiken, and Jeffrey B. Hulen—could hardly have wished for better or better-timed publicity. Nor could they ever hope for a better illustration of one of their main points, which is that volcanologists (at least one of whom is killed on the job somewhere in the world each year) are becoming increasingly sophisticated about predicting eruptions. The people of Montserrat lost much of their property but their lives were spared. This is in contrast with Mount Unzen in Japan where about 40 people were killed in 1991 or Mount St. Helens in the US Pacific Northwest where, despite its remoteness, at least 35 people died in 1980.

The fact that science is improving volcano prediction (and simulation) is only one of the authors' points. Another is that volcanoes aren't all bad. The constant pushing-up towards the surface of stuff from far down inside the Earth replenishes the supply of accessible gold, diamonds, and other valuable commodities. Past volcanoes, as well as providing palaeontologists with many of the fossils they study, are responsible for the special richness of the soil in some of the world's important wine-making and coffee-growing regions. The Romans knew the advantages of volcanic debris in road-building. Obsidian, the volcanic glass so highly valued among early Native North Americans as an

object of trade, is used today in eye surgeon's tools. There is a trace of volcanic material in some kinds of toothpaste. Volcanic clay is the basis of kitty-litter. And so on.

The authors make a cohesive argument out of all their stray facts and trivia, but the gathering together of so much information on one subject from so many sources and perspectives is what makes *Volcanoes* interesting. In running through history's most disastrous volcanic incidents, the writers grapple with the fatal or near-fatal attraction that such spectacles have always had on observers. Pliny the Elder died in the eruption of Vesuvius in AD 79. The same volcano almost claimed the life of Goethe in 1787. "We tried to go half a dozen steps further," Goethe wrote, "but the ground under our feet became hotter and hotter and a whirl of dense fumes darkened the sun and almost suffocated us."

Volcanoes is fully aware of the strangely compelling nature of volcanoes but not quite as up to date as it might be. It misses the comments of Susan Sontag on the subject, for example. In fact, the volcano in literature and in art is probably the only soft spot in this lucid and worthwhile piece of science-writing.

I'm sure the three American scientists would enjoy knowing about Anne Carson, the contemporary Canadian poet whose reputation is erupting all over these days as the tectonic plates of literary reputation continue to shift. Carson is also a visual artist. As a painter, her only subject is—volcanoes.

A more popular discussion of this same area of earth science, present-

ed from the perspective of two structural engineers, Matthys Levy and Mario Salvadori, is **Why the Earth Quakes: The Story of Earthquakes and Volcanoes**, just reissued in paperback (Penguin Canada, \$16.99). Also among the latest reissues are **World Fire: The Culture of Fire on Earth** by Stephen J. Payne (UBC Press, \$19.95) and **Braving the Elements: The Stormy History of American Weather** by David Laskin (Doubleday Canada, \$17.95). All of these attain a similarly high level of reader accessibility. So does **Weathering the Storm: Tornadoes, Television and Turmoil** (Oklahoma, US\$16.95, paper) by Gary A. England, a TV meteorologist in Oklahoma City, the heart of America's so-called Tornado Alley. This current interest, not simply in weather and earth science, but also in the extremes of weather and earth science, is also clearly reflected in movies these days. Much of this attention is no doubt environmental worry showing in new ways. But pundits could also explain it glibly as being related to the ever-darkening shadow of the millennium that is now almost directly over our heads.

SOME OTHER NEW BOOKS OF INTEREST to *Rotunda* readers:

- **The Oxford Companion to Archaeology** (Oxford, \$59.95) is one of those especially meaty reference books that one could spend many long winters foraging in for warmth and sustenance. If there is a single thread running through the book, it is the story of the how archaeology's centre of gravity has shifted from the field to the laboratory, from the pick and spade to the mi-

roscope and computer screen. In his introduction, the editor, Brian M. Fagan, cautions readers against pop culture's notion of what archaeology is, "the stuff of which dreams are made, a world of adventure, intrigue, and romance, of golden pharaohs and long-vanished civilizations [and] tough, pith-helmet-clad men and women slashing their way through clinging jungle or penetrating the secrets of ancient pyramids." Yet such Indiana-Jonesism is precisely what Fagan caters to in his other new book, **Eyewitness to Discovery: First-Person Accounts of More than Fifty of the World's Greatest Archaeological Discoveries** (Oxford, \$34.95), a collection of heart-gripping moments in the history of the discipline, from the opening of King Tut's tomb to the discovery of the Dead Sea Scrolls to the unearthing of the Chinese emperor's terra cotta army. Yet even here one sees the slow but steady triumph of science and scientific technique over romance and adventure. How strange it sounds that little more than a century ago, for example, Williams Flinders Petrie, the famous Egyptologist, dumbfounded observers by the care with which he counted, sorted, and catalogued pottery shards.

• **Patterns That Connect: Social Symbolism in Ancient & Tribal Art** (Abrams, \$89) is the latest project of that always-remarkable Canadian, Edmund Carpenter, the supreme advocate of pure anthropology and one-time associate of Marshall McLuhan in the seminal journal *Explorations*. *Patterns* is actually a one-volume synthesis of Carpenter's self-published 12-volume work on the same subject. Both are *homages* to the American anthropologist Carl Schuster (1904–1969), who believed that palaeolithic peoples devised a rich vocabulary of visual symbols and motifs to illustrate their genealogy, and that such images, with which they decorated their bodies, clothing, and tools, can be decoded and observed in tribal art today by tracing a "memory-line." As Carpenter has written, Schuster was not the

first to suggest this idea (one later derided by other anthropologists), but he was, in Carpenter's view, the first to make it believable. As much as anything, *Patterns That Connect* is Carpenter's tribute to Schuster the man—and to the idea of a lone-wolf anthropologist who devotes his life to some wild proposition in the face of the world's derision or hostility.

• Everyone remembers Samuel Johnson's definition of the lexicographer: "A writer of dictionaries; a harmless drudge, that busies himself in tracing the origin, and detailing the significance of words." Few recall that the same Dr. Johnson, when compiling his famous 1755 *Dictionary*, concluded that "to pursue perfection [is] to chase the sun." Jonathon Green's book **Chasing the Sun: Dictionary Makers and the Dictionaries They Made** (Fitzhenry & Whiteside, \$42) is an informative survey, analytical as well as anecdotal, of dictionary-making from the Babylonian tablet to the CD-ROM. In addition to Dr. Johnson, prominent personalities in the narrative include Noah Webster, who Americanized English spellings as part of a patriotic crusade. Also lurking inside the story are two sets of partners: Charles and George Merriam, bookselling brothers from Massachusetts who made the transition from Bibles to dictionaries, and the equally eponymous team of Isaac Funk and Adam Wagnalls.

• **City Center to Regional Mall** by Richard Longstreth (MIT Press, US\$60) concerns the relationship between the automobile and retailing, and between both of those on the one hand and architecture on the other. The case being studied is Los Angeles between 1920 and 1950, when the rise of the personal automobile and the auto industry's destruction of public transit pretty much killed off the idea of downtown middle-class living. But of course the implications for urban centres across North America are obvious. This wisely illustrated, clinically documented horror story of a book could be usefully read alongside Jane Jacobs' classic *Death and*

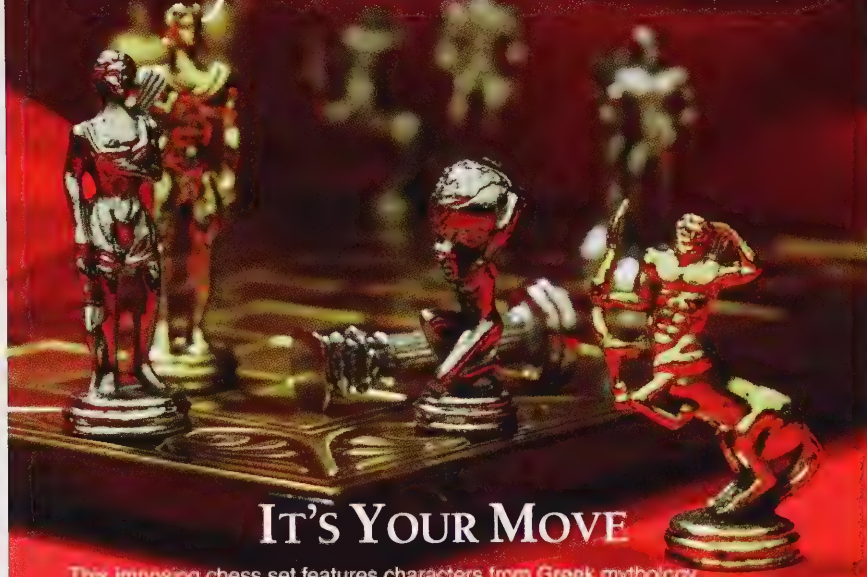
Life of Great American Cities, the mother of such thinking.

• Hans Holbein the Younger (1497/8–1524) was certainly the most distinctive and impressive artist of the Renaissance in northern Europe. His several portraits of Erasmus and of poor Sir Thomas More are images familiar enough to be on postage stamps. In fact, there was a British TV miniseries not too long ago whose plot (or one of them) turned on a Holbein portrait that had been passed down the generations of a certain English family.

The book **Hans Holbein** by Oskar Batschmann and Pascal Griener (Princeton, US\$60) has 75 colour plates and hundreds of line illustrations tracing the evolution of Holbein's brand of realism and the vicissitudes of his life and career. Like any Renaissance artist, he was a master of design as well as art, producing jewellery, carvings, and all manner of other practical necessities. But, again, like his contemporaries, his stock in trade was painting based on Christian themes. He treated such subjects with more freedom from devotion than was customary, a fact that caused him much anxiety, and much moving about, during the Reformation. In the end, he took his talent to England, where he became court painter to Henry VIII. In fact, the image of Henry we carry in our minds owes much to Holbein's various portraits. Henry, incidentally, added one more item to the artist's bag of tricks: he sent him to Europe to make likenesses of prospective wives. *Hans Holbein* is quite wonderful in the fidelity of the reproductions but also in the way the text treats the growth of the painter's reputation in his own lifetime.

• Certain university presses seem to specialize in mega-projects, those seemingly endless (and endlessly worthy) projects such as the University of Toronto Press's *Collected Works of Erasmus*, which has been underway for decades. The newest of these is a series called *The Culture and Civilization of China* published by Yale in partnership with the state

Play with the Gods



IT'S YOUR MOVE

This imposing chess set features characters from Greek mythology. Hand finished, patinated in bronze and nickel, weighing nine pounds.
Special Introductory Offer for Members Only: Solid wood backgammon set included free with the first 20 sets sold (\$300 retail value)

Available in the ROM Shop, June 21–September 13

Royal Ontario Museum, 100 Queen's Park (416) 586-5784

Have Tea with a Gorgeous Italian



ITALIAN BLUE

Fine Bone China by Spode, since 1812

Available in the V&A Shop, June 21–September 13

Royal Ontario Museum, 100 Queen's Park (416) 586-5784

BOOK REVIEWS CONTINUED

publishing house of the People's Republic. The first volume, *Three Thousand Years of Chinese Painting* (US\$75), has just appeared, the work of three American and three Chinese scholars. The series is expected to run to 75 volumes over the next decade and a half. That any such scheme on so large a scale should just be beginning in this era of restraint—that such optimism still lives on—is worth rejoicing in.

Personally, though, I had been a bit sceptical of the quasi-official hands-across-the-Pacific nature of the scheme. The attitude is borne out by the cold shoulder given to the former imperial collection, the world's richest, now at the National Palace Museum in Taiwan. Still, this is a remarkably fine piece of synthesizing, co-operating, and book-making. The optimist in me hopes that the partnership will increase our depth of understanding of Chinese art in the West. Popularity has never been the problem; context has. To this end, people interested in *Three Thousand Years* (one of the year's greatest publishing bargains by the way) might like to keep watch for two new titles from Princeton: **Painting and Private Life in Eleventh-Century China** by Robert E. Harrist, Jr., (US\$65) and **Pictures and Visuality in Early Modern China** by Craig Clunas (US\$39.50).

• Just who exactly were the Celts? The question continues to elicit controversy not only among people who claim Celtic descent but also among anthropologists, historians, and other scholars. In the **Ancient Celts** (Oxford, \$66.95), Barry Cunliffe, who teaches European archaeology at Oxford, compares the archaeological evidence with the textual evidence to come up with a picture of "barbarians" who were nonetheless remarkable artisans and spent much of their time terrorizing the Roman and Greek worlds before receding to their core territory.

DOUGLAS FETHERLING

Douglas Fetherling is the book review editor of Rotunda



Unlike the house mouse (facing right), the deer mouse is both a nuisance for cottagers and a host for a virus that when passed to humans, causes deadly Hantavirus Pulmonary Syndrome.

Deer Mice and the Hantavirus

WHEN PEOPLE OPEN THEIR COTTAGES in the spring they are often surprised to find lingering, uninvited winter guests, including deer mice and other rodents. The handsome, unassuming deer mouse (*Peromyscus maniculatus*), in particular, has generated a stir because it was recently discovered to be a host for a virus that when passed to humans, causes Hantavirus Pulmonary Syndrome (HPS), a deadly respiratory disease. Current concern about new and emerging viruses (dramatized in books such as *The Coming Plague*) coupled with the discovery of hantavirus in Ontario makes one imagine space-suited virus hunters roaming the countryside trapping deer mice. As a source of information on the province's lesser-known mammals, I know that every spring my answering machine will overflow with questions from anxious cottagers.

Hantaviruses are a group of microbes that became known in the western world during the Korean War. In Korea many American GIs were afflicted with a mysterious hypertensive renal disease, ultimately traced to a virus (Hantaan virus) carried by local field mice. Subsequently several other species of hantaviruses were discovered in Asia and Europe, most of which caused mild kidney disease and all of which were carried by some local species of rodent.

The first discovery of a native hantavirus in North America was an innocuous form dubbed "Prospect Hill" after the place where it was first found in 1982. It caused no apparent disease in humans and was carried by meadow voles (*Microtus pennsylvanicus*). Subsequently, additional species of hantaviruses were found throughout the New World carried by a variety of rodent hosts, distributed from Argentina to the

Northwest Territories. These New World hantaviruses are a relatively ancient group, and were here long before humans arrived.

In 1993 a deadly North American hantavirus (Sin Nombre virus) was discovered in the Four Corners region (the conjunction of New Mexico, Utah, Colorado, and Arizona). Interestingly, this new virus caused acute respiratory distress rather than the kidney ailments produced by Old World hantaviruses. More ominously, although apparently difficult to contract, onset of the disease is rapid and symptoms are devastating, with mortality ranging from 30 to 50 per cent of symptomatic patients. The primary host for Sin Nombre virus and some closely associated varieties proved to be the deer mouse. This species is one the most ubiquitous rodents in North America, ranging from east to west across the continent and from northern Mexico to

Probably the best
radio programs
you'll ever hear.

You be
the judge.

Classical and Jazz
Swing, Folk and Blues
University Credit Courses
BBC World Service News
Arts Coverage
and much more.

Listener Supported
No Commercials

91.1
CJRT-FM



For a Free Program
Schedule call Toronto
1-888-595-0404

PRACTICAL TIPS CONTINUED

the Northwest Territories, including all of Ontario. The virus causes no respiratory disease in the deer mice themselves.

Since its initial discovery, 202 cases of HPS have been reported in the United States and Canada, concentrated in the west. In Canada, a total of 25 cases have been confirmed, with Alberta being the dubious leader (16 cases) followed by British Columbia (6), and Saskatchewan (3), in keeping with the prevalence of the disease in relatively dry regions. Infected deer mice, however, are now known from every province in Canada and the Northwest Territories.

In Ontario, hantaviruses have been found residing at relatively low frequencies in several populations of *P. maniculatus*, reaching a peak near Algonquin Park. One purported case of human HPS from Owen Sound made a splash in the press but eventually proved not to be caused by hantavirus. Nonetheless, in the interim the story precipitated numerous calls and special deliveries of frozen mouse bodies to my office.

Hantaviruses are usually transmitted by breathing dust and other airborne particles infected with rodent urine or faeces. Thus, most people who contract the disease have close contact with mice, such as farmers or ranchers, scientists who study mice at close quarters, or cottagers opening previously vacant dwellings inhabited by small, furry guests.

Interestingly, 60 per cent or more cases of HPS have been in men, probably because men have greater occupational potential for exposure. But any age group, sex, or race is susceptible. Reasonable precautions will substantially reduce the risk of getting the disease.

What should you do if you find your cottage or home infested with mice? First, eliminate the mice by trapping them, and then disinfect and destroy the carcasses. One note of caution: keep trapping for a few days after the last mouse is caught—where you have seen one mouse there are probably more. The area the mice have inhabited should be

sprayed with a household disinfectant to reduce dust (for example, a 10 per cent bleach solution for heavily infested areas or 1 per cent for lightly soiled places), and then cleaned while wearing rubber gloves. The gloves and clothing should be cleaned and disinfected after use. A face mask and eye protection should also be worn and, in confined spaces, the mask should be equipped with a high efficiency particulate air (HEPA) filter.

The necessary degree of precaution varies with the situation. Someone hiking through forest in areas occupied by deer mice need exercise only a low level of caution, whereas a farmer cleaning out an infested, enclosed outbuilding should take the most stringent precautions. Once the mice are evicted from the premises, all entry holes should be blocked with wire mesh—deer mice can squeeze through holes as small as 6 mm ($\frac{1}{4}$ inch) in diameter. Potential food sources, such as dog or cat food, should be put away in closed containers, at least at night. Outdoors, woodpiles, hay, and garbage cans should be moved at least 30 metres (100 feet) away from buildings.

In Ontario, the risk of contracting deadly forms of hantavirus appears to be low. However, the virus and its primary host, the deer mouse, do occur in the province and reasonable precaution should be exercised to limit exposure to airborne viruses. If you find mice in the cottage, evict them and give the place a good spring cleaning—it's about time anyway, isn't it? Finally, I do not wish to give our deer mice a bad rap. Much of what we know about ecology, genetics, and evolution of small mammals stems from study of this large and wonderfully varied group of native American mice. We are simply better off with them remaining outdoors rather than sitting with us watching reruns of Tom and Jerry.

MARK ENGSTROM

Mark Engstrom is a curator in the Centre for Biodiversity and Conservation Biology, Royal Ontario Museum



A closeup (bottom) of the tarnished mottled surface of a silver tray (top) that once was lacquered. Because removal of the lacquer was not complete, cleansing foam could not consistently reach the silver surface.

Don't Lacquer That Silver

I AM FREQUENTLY ASKED BY CURATORS and members of the public if silver should be lacquered to prevent tarnish. The answer is "No!"

In the December '97/January '98 issue of her magazine, Martha Stewart wrote:

We should take our restoration cues from the master scholars and highly educated

chemists at museums. They set the standards for our own treatment of precious silver . . . Museums used to keep their own display silver polished, or stored in Pacific cloth or treated tissue paper. Today, however, museums are recommending that display silver be lacquered, particularly when it is not in constant use, as curators have been increasingly concerned about the finite amount of silver

that wears away with every polishing.

Martha is right about the concern of curators; however, some museums have found that lacquering is a poor solution for preventing tarnish. In fact, conservators are now more concerned with the damaging effects of improper lacquering and its removal. Proper safe storage and

display is the best protection from tarnish.

Throughout the 1970s and 1980s, conservators believed that a layer of wax or the newer synthetic resins could provide a protective barrier that would prevent or at least slow down the rate of tarnish or corrosion on an artifact surface. This was advised for copper alloys (brass or bronze), precious metals, silver, and gilt silver.

In what turned out to be a vain attempt to slow down tarnish or corrosion, metals were liberally coated with waxes and so-called modern lacquers made of long chain carbon compounds with names like polymethylbutylmethacrylate. We were advised to apply three even coats of lacquer. "Even" was the operative word, but applying this coating evenly with a brush is extremely difficult. I never mastered the technique.

The best technicians vowed that it was impossible to see the difference between an unlacquered and a

perfectly lacquered object. If there was too much shine, a matting agent called Santocel was added to dull the finish. In practice, however, most technicians could not achieve an invisible brush stroke. Visually, many connoisseurs were never happy with the lacquered look, especially on pieces with fine detail because the lacquer or resin tended to pool in the detail. The plastic-lacquer shine destroyed the beauty of the silver's sheen. And the feel of a lacquered piece was really nothing like the palpable sensual softness of the real thing.

In the 1990s, the results of this preventative conservation are coming home to roost. Museums are repositories of pieces with treatments gone wrong. Over time many modern resins were found to yellow, embrittle (flake off), or even worse, become insoluble. They were also prone to wear and mechanical abrasion, which would break the even seal formed by the lacquer.

Lacquers are *not* impermeable,

and therefore, over the years, even lacquered pieces become tarnished. Then, the lacquer has to be removed to polish the objects. This is a major problem when the coating has become insoluble.

The tray illustrated is a perfect example of differential corrosion caused by complications from lacquering. On display in the Queen Anne Room of the Samuel European Galleries, the tray tarnished heavily and quickly, so it was removed for cleaning. Records noted that the tray had been lacquered but that the lacquer had been removed in 1972. A quick polish with Silver Foam should have been all that was needed.

Cleaning produced a mottled surface, which was puzzling until I examined the object under a microscope and discovered that the lacquer had not been thoroughly removed so the cleansing foam had not consistently reached the silver surface. The areas on the tray's surface that were completely bare of

★ ★ New from the ROM ★ ★

The Arctic Sky

INUIT ASTRONOMY, STAR LORE, AND LEGEND

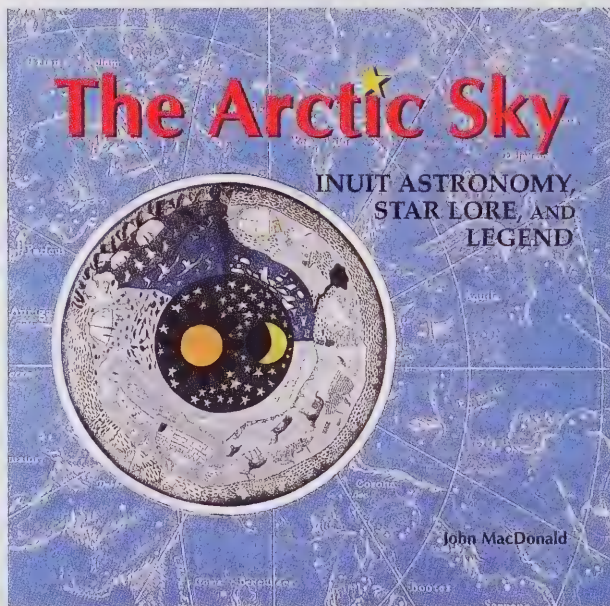
Constellations, star lore, legends and mythology, the sun, moon, planets, shooting stars, and atmospheric phenomena such as rainbows and aurora borealis are just some of the highlights of this memorable journey through the northern sky.

Colourfully illustrated with prints, drawings, and sculptures from the ROM's Inuit collections, *The Arctic Sky* combines interviews with the Inuit elders and the historical records of arctic explorers and other keen observers.

A guided tour of the arctic universe

\$29.95 (Be sure to ask for the Members' special discount.)

Available in the ROM's Canadian Reflections Shop and other fine bookstores



ROM

resin were most tarnished. Severity of tarnishing on the other areas corresponded to the varying thickness of the remaining resin. This is what caused the mottled appearance. Scratches through the lacquer tarnished heavily and appeared black. Because the lacquer is not impermeable to gases, it merely retards the permeation of the gas to the metal surface. The rate of permeation slows as the layers of resin thicken.

Because the silver was tarnishing at different rates, the amount of silver involved in the corrosion cycle varied over the tray's surface. This is called differential corrosion. If allowed to continue long enough, the surface of the object becomes permanently etched. A more aggressive polishing technique is required to recreate a smooth, highly polished surface appearance. Differential corrosion will also result from: uneven application of the lacquer layer and damage to the lacquer layer through mechanical means,

scratching, or wear.

Thorough removal of lacquer is not easily achieved, contrary to the information provided by manufacturers. Early in my career, I found the removal of lacquer from objects such an onerous task that I resolved never to apply it. The decision whether to lacquer should be made on an individual basis for each object and should be carefully weighed with other options.

Professionals from the Rijksmuseum in Amsterdam have just conducted a survey of museum collections. They are looking for non-interventional methods for safe display and storage of silver and are canvassing the international museum community to learn about methods that have proved successful in practice.

The Royal Ontario Museum is carrying out its own practical research. Air is filtered through charcoal in the display cases containing silver in the Canadiana Gallery. Charcoal, an adsorbent material, re-

moves from the air and holds pollutants, thereby preventing their contact with the silver that leads to tarnishing. After 4.5 years the silver on display is still bright. A similar system feeds dry, charcoal-filtered air to the silver installation in the Joey and Toby Tanenbaum Gallery of Byzantine Art.

For the ROM installation of objects complementing the exhibition *A Grand Design: The Art of the Victoria and Albert Museum*, we are putting flat trays of silica gel covered with Pacific silver cloth on the bottom of some cases and a simple charcoal cloth on the bottom of other cases to test two more methods for preventing tarnish. The former method has proven very effective at the Walters Art Gallery in Baltimore. Hopefully we will have some very positive results.

SUSAN STOCK

Susan Stock is archaeological metals conservator in the Conservation Department, Royal Ontario Museum

SATELLITE ATLAS

WorldSat INTERNATIONAL INC.

"Realistic and Breathtaking Views of the Earth Offered In This One-of-a-kind Atlas"



ONLY \$39.95

14.5" x 10.5"

Detail: 45% of actual size



NOW YOU CAN EXPLORE THE ATLAS IN THIS INTERACTIVE CD-ROM

- A 2D view of the entire Earth, interactive 3D modeling and fly-through.
- Searchable database of 1.6 million place names and world statistics.
- The power to view and rotate 3D models.
- Demographic and transportation routes.
- Clip and Paste features to import charts and images.

TO ORDER

By Phone: 1-800-387-8177 • By Fax: 905-507-8194 • VISA & M/C • In Canada add: 7% G.S.T. • In Ontario add: 8% P.S.T. • Shipping/Handling: \$4.50



ONLY \$49.95

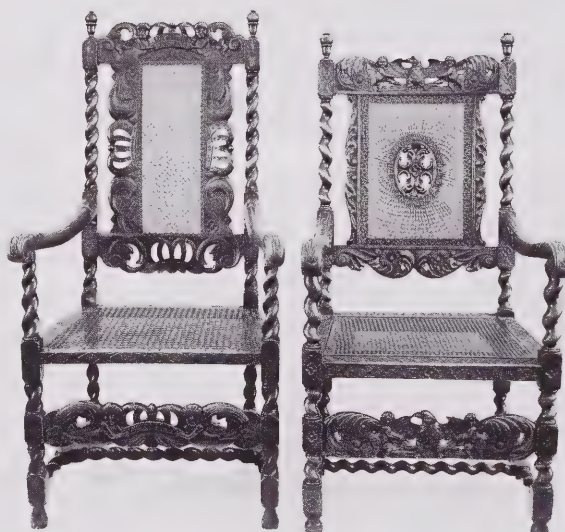
Art Prints of the World, Continents & Cities are also available.

ROM ANSWERS

Dear ROM Answers,

The 12 stained-glass window panels, pictured in the photos, were originally part of a landing window of a home in London, Ontario, which was owned by one of my great-great-grandfathers. He had come from Scotland and it is not known if he brought the windows with him. When the house was demolished, my parents had the glass removed and set into wrought-iron doors, which now grace our sun room. There is a whimsical scene for each month. The windows appear to be of European origin, dating from the mid to early 19th century. Can you tell me anything about their origin or age?

I also enclose photos of two head-table armchairs that have been in the family (English) for more than four generations. I believe that they are made of oak or walnut. The smaller chair weighs 10.9 kilos while the other weighs 6.8 kilos. They are held together by joins rather than screws, have caned backs and seats, and the top rail of one has a crown supported by cherubs while the other has an eagle with cherubs. This motif is duplicated on the stretcher between the front legs. The chairs measure 152.4 cm x 61 cm x 61 cm and 119.4 cm x 61 cm x 61 cm. There are also four oak dining-room chairs that do not have arms or the



crown or eagle motifs. Can you tell me something about their antiquity?

M. S. A., TORONTO

Dear Reader,

Judging from the photographs, your windows would appear to be interesting examples of Aesthetic Movement stained glass dating to about 1880. The Aesthetic Movement was an English style and manner of decorating championed by public figures such as Oscar Wilde, James Abbott McNeill Whistler, and Walter Crane. Kate Greenaway, an English illustrator of children's books, also played an important role. Her publications were popular on both sides of the Atlantic, and her Empire-inspired costume designs influenced fashion. Illustrations, which may have been used for a calendar or book about the seasons, by Kate Greenaway or one of her contemporaries who worked in a similar style, were the source of inspiration for the enamelled scenes found in each window panel.

The rather blurred brushy painting of the enamelled scenes recalls amateur enamel decoration on porcelain dating about 1880. Amateur artists, mostly women, often copied illustrations from popular publications. It is possible that the enamelled scenes were fired for a talented amateur and then mounted in

If you possess furniture, silver, glass, metalwork, ceramics, textiles, or small decorative objects that may have an interesting past and have aroused your curiosity, this column is for you. Send a clear black-and-white photograph (or 35-mm colour slide) of the object against a simple background, providing dimensions, a description, any markings, or any known details of its history to: ROM Answers, c/o Rotunda Magazine, Royal Ontario Museum, 100 Queen's Park, Toronto, Ontario M5S 2C6. Be

sure to enclose a stamped, self-addressed envelope large enough to include any photos that we must return to you with the reply.

Neither Rotunda nor the author nor any other person who may be consulted assumes any legal responsibility for these opinions or their ramifications. No financial appraisals will be offered. If your query is selected to be published in the column, only your initials and city will appear, in order to protect your privacy. Letters will be acknowledged as staff time comes available.

the stained glass borders by an established workshop of professionals who executed church and residential windows. Check the enamelled scenes for a signature, monogram, or dates. Amateur artists of the 1880s frequently signed their work.

For more information about the Aesthetic Movement, you can consult *The Aesthetic Movement: Prelude to Art Nouveau* by Elizabeth Aslin published by Praeger, 1969. You have an interesting set of windows.

Your chairs would appear to be examples of the Charles II revival style in furniture. Chairs of this type made of walnut or beech with caned backs and seats were produced in England from about 1670 to the 1690s. Reproductions in this style, often made of oak, were produced from the late 1800s to the mid 1920s. The superior tools and lathes that were introduced in the 1800s made it easier to work oak and facilitated carving.

The chair with the eagle motif is definitely a reproduction. The can-

ing on the back gives it away. Frequently, fancy chairs made in a revived Adam style in the late 1800s have backs of caning surrounded by a wooden medallion. This chair is an example of a later stylistic innovation being added to an earlier style.

The cresting with the crown supported by two putti found on the taller chair is common for this type of English chair dating to the late 1600s. Such a motif is thought to be symbolic of the restoration of the monarchy and the landing of King Charles II in England in 1661. However, I cannot recall ever having seen crowns positioned on their sides as they are here around the central panel of caning. Crowns were always placed horizontally in authentic designs from the period. The central panel of caning appears to be a little too wide; panels on most chairs of this type tend to be elongated oblongs.

Your chairs are unlikely to have the following features that distinguish authentic 17th-century exam-

ples: tiny holes from woodworm, which likes to eat the walnut or beech; rough surfaces on areas that are not exposed to view and sometimes even bits of bark as every bit of the tree was used; cracks and wear to the wood, especially in places such as the feet, which are sometimes replaced; and evidence of re-caning one or more times.

By the late 1800s, when reproduction furniture was popular, there were machines that could finish the wood so that the undersides of seats and other areas were planed perfectly smooth and workers were not so thrifty that they used outside sections from the tree with the bark still attached.

It may be possible some day to identify your chairs from a furniture catalogue of about 1900. Check the bottoms just in case there is an impressed model number or part of a manufacturer's label.

PETER KAELLGREN,

DEPARTMENT OF WESTERN ART AND CULTURE, ROYAL ONTARIO MUSEUM

ROTUNDA

the magazine of the Royal Ontario Museum

In the Fall 1998
issue of *Rotunda*...

Fieldwork in Vietnam: The Untold Story

BY
ROBERT MURPHY



Royal Ontario Museum
100 Queen's Park
Toronto, Ontario M5S 2C6
(416) 586-5590

Probably the best radio programs
you'll ever hear.

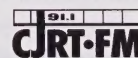
You be the judge.

Classical and Jazz
Swing, Folk and Blues
University Credit Courses
BBC World Service News
Arts Coverage
and much more.

Listener Supported
No Commercials

91.1

CJRT-FM



For a Free Program Schedule call Toronto 1-888-595-0404

❖ LOOK AGAIN ❖



Stretch to Fit

UNFINISHED MOCCASINS? MUSEUMS IN BERN, Edinburgh, and Ottawa hold a number of moccasins with unclosed heels, and the pair shown here were given to the ROM by Dr. J. H. Garnier, an eminent 19th-century naturalist. He collected them from the Blackfoot, but stylistic considerations show that they were made by the Dene around 1885. Garnier noted that they were made to “stretch to fit.” This quotation is somewhat ambiguous. Garnier may have simply been making the general statement that by their supple nature the moccasins

would stretch to fit. On the other hand, he may have meant that the heels were purposely left unclosed so as to fit a variety of foot sizes.

If the latter were true it seems plausible that such “unfinished” moccasins were made for trade as they would have shipped more easily in their flattened state. In earlier days, open-heeled moccasins would have been serviceable to unmounted plains warriors who commonly tucked several pairs of moccasins under their belts before taking the war path to distant lands. ❖

PHOTOGRAPHY BY BRIAN BOYLE, ROM



© 1997 The Trustees of the
Victoria and Albert Museum.

Photos courtesy of *A Grand Design, The Art of The Victoria & Albert Museum: Detail from "Maestro Giorgio of Gubbio" by Solomon Alexander Hart. "Vase and Cover" attributed to Giorgio di Pietro Andreoli.*

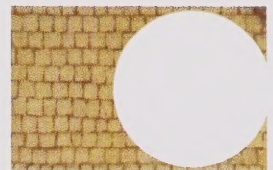
INSURANCE FOR THE EYE OF THE BEHOLDER

Distinctive possessions call for the kind of expertise and understanding that Chubb brings to insurance.

As one of the world's foremost insurers of artworks, antiques and collectibles, Chubb Insurance has a Masterpiece Valuable Articles policy to protect your collection.

We invite you to see a spectacular collection on display for a limited time only at the Royal Ontario Museum: *A Grand Design, The Art of The Victoria & Albert Museum*, June 21 through September 13, 1998.

A collection of this magnitude is truly unique. However, you don't need a museum quality collection to require the special kind of coverage Chubb can provide. You simply need to call your broker or contact Chubb Insurance Company of Canada for more information at 1-800-268-4120.



Visit us at www.chubbinsurance.ca

For promotional purposes, Chubb and Chubb Insurance refer to the Chubb Insurance Company of Canada who issues coverage. This ad is descriptive only. The precise coverage afforded is subject to the terms, conditions and exclusions of the policies as issued.

Insure your world with

CHUBB

CHUBB INSURANCE COMPANY OF CANADA

WRITERS' INSPIRATION STANDARD ON ALL MODELS.



"We found ourselves leaning on this Oldsmobile in the corners as if it were a BMW or Mercedes Benz, and it outperformed the Camry and the Maxima."

Automobile Magazine.

"Because Olds bent over backwards to see that the Intrigue's chassis was as stiff as possible, there's an extremely taut feel to the way the sedan behaves."

Edmonton Journal.

"Intrigue's cornering is flat and stable, the car takes a firm, confident set in fast curves, and it's a joy to wind it down twisty roads."

The Toronto Star.

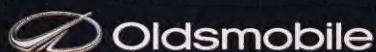
"Until Intrigue, nothing from the Motor City has had the elusive, slick, sophisticated feel of Japan's best."

USA Today.

INTRIGUE

A SOPHISTICATED TWIST ON A SPORTS SEDAN

Generously equipped from \$27,998*.



For more information, visit our web site at www.gmcanada.com™ or call 1-800-GM-DRIVE.

www.gmcanada.com is a trademark of General Motors Corporation.

*Starting MSRP for 1998 Intrigue base model is \$27,998 plus freight (\$785) (MSRP is \$28,783 including freight).

Licence, insurance and taxes are extra. Dealer may sell for less. GL model shown at extra cost.